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Zacks Small-Cap Research

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SANUWAVE Health (SNWV-OTC)

SNWV: U.S. Strategy Kicking-Off, Initial Revenue Expected in Q1

Smith & Nephew has traded at approximately 3x analyst's forecasted forward revenue. We have SNWV generating approximately $34M in revenue in 2021 - based on the 2021 3x P/S multiple, this values SNWV's equity at about $100M, or $0.75/(basic)share.

Current Price (04/09/18)	$0.58
Valuation	**$0.75**

OUTLOOK

With the U.S. strategy firming up, including initial distribution through Premier Shockwave and initiation of various clinical (marketing-focused) clinical studies, SNWV is wasting no time in capitalizing on the domestic opportunity. Management expects revenue contribution from the U.S. as early as Q1 – and (mostly) depending on initial rates of VA-related adoption and utilization as well as (likely more incremental) OVA (i.e. outside VA in U.S.) interest, we could see material growth in U.S. revenue throughout the year. Clinical / case studies gearing up to support initial adoption, reimbursement and awareness – expect this to be a key component of the initial U.S. strategy and one we will be eager to hear updates about. Most of our forecasted 2018 revenue is still OUS. dermaPACE is still awaiting ANVISA approval in Brazil – assuming that happens, MundiMed related revenue contribution could be material – but likely not until later in 2018. Meanwhile, recent expansion of the OUS footprint from 9 to 14 countries, expanding 'label' from orthopedics-only to now include wound treatment in several territories and new distributor relationships are all potential catalysts that could have a positive impact on international revenue growth.

SUMMARY DATA

52-Week High	**$0.61**
52-Week Low	**$0.08**
One-Year Return (%)	**391.67**
Beta	**-2.67**
Average Daily Volume (sh)	**330,566**
Shares Outstanding (mil)	**141**
Market Capitalization ($mil)	**$83**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**0**
Insider Ownership (%)	**23**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**10.4**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2017 Estimate	**N/A**
P/E using 2018 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**High,**
Type of Stock	**N/A**
Industry	**Med Products**

ZACKS ESTIMATES

Revenue
(in 000s of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2017	150 A	111 A	162 A	316 A	739 A
2018	347 E	445 E	674 E	851 E	2,317 E
2019					7,008 E
2020					17,082 E

Earnings per Share

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2017	-$0.00 A	-$0.01 A	-$0.01 A	-$0.02 A	-$0.04 A
2018	-$0.01 E	-$0.01 E	-$0.01 E	-$0.01 E	-$0.05 E
2019					-$0.02 E
2020					-$0.01 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

Q4 Results, Operational Update: *OUS Sales Finally Rebound, Initial U.S. Revenue Expected Q1….*

SANUWAVE reported Q4 2017 results and provided a business update. Revenue was relatively strong and about twice the average through the first three quarters of the year and the third highest in company history. And while full-year revenue was largely disappointing, falling 46% from 2016 and the lowest since 2010 ($728k), we continue to expect revenue to return to meaningful growth in 2018.

With the U.S. strategy firming up, including initial distribution through Premier Shockwave (targeting VA and Indian Health) and initiation of various clinical (marketing-focused) clinical studies, SNWV is wasting no time in capitalizing on the domestic opportunity. Management expects revenue contribution from the U.S. as early as Q1 – and (mostly) depending on initial rates of VA-related adoption and utilization as well as (likely more incremental) OVA (i.e. outside VA in U.S.) interest, we could see material growth in U.S. revenue throughout the year.

But, with (effectively) no reimbursement, we continue to think 2018 will be more important as an opportunity to build additional awareness and clinical evidence and to educate wound-care KOLs about dermaPACE. We are encouraged by the reasonableness of the initial U.S. strategy management outlined on the call – which, essentially, clearly recognizes challenges posed by lack of reimbursement and addresses those challenges by what appears to be a systematic approach towards both initial commercialization (via already established Premier relationship targeting non-insurance providers) and evidence-based approach to encourage adoption.

Most of our forecasted 2018 revenue is still OUS. dermaPACE is still awaiting ANVISA approval in Brazil – assuming that happens, MundiMed related revenue contribution could be material – but likely not until later in 2018. Meanwhile, recent expansion of SNWV's OUS footprint from 9 to 14 countries, expanding 'label' from orthopedics-only to now include wound treatment in several territories and new distributor relationships are all potential catalysts that could have a positive impact on international revenue growth. Certainly FDA clearance, while largely meaningless from a OUS regulatory standpoint, can act as a proxy 'stamp of approval' and prove an important and influential marketing message and help drive adoption. Clinical studies are also expected to initiate outside of the U.S. – including in Canada and Australia. And, finally, as it relates to potential international catalysts – SNWV indicated that they have had discussions with at least two more potential JV-type partners.

Financials

Q4 revenue was $316k, while down 51% yoy, it represents 96% sequential growth and more than twice the $141k average of the first three quarters of 2017. SNWV did not provide specifics regarding what was behind the relative strength in revenue in Q4 – although at least a portion can be attributed to receipt of the upfront fee from MundiMed. And, while management had predicted earlier in 2017 that full-year revenue would increase from the ~$1.4M level in 2016, the premonition fell fall short. Instead, revenue fell 46% to just $736k in 2017.

As we noted in our Q3 update, we had opined that revenue weakness during the first half of 2017 may have been related to mostly non-fundamental reasons such as adverse timing or, in the case of S. Korea, political turmoil. But, when Q3 numbers showed another disappointing topline number with (again) no obvious relationship between the misses and the presumed causes, we felt that it was clear that demand-related traction via expansion of the distribution footprint would not materialize as quickly as we had previously anticipated.

S. Korea, which SNWV has indicated remains the company's leading market, was expected to represent much of the anticipated revenue growth during 2017 as a result of availability of reimbursement. That appears to not have materialized – whether that is due to the political upheaval earlier in 2017 or something else, is still not completely clear. But, the fact that SNWV's distributor accounts for 78% of the company's A/R balance and 48% of their bad debt balance, may suggest that their S. Korean partner is having difficulty finding buyers.

Despite the issues, we do think that it is more likely than not that revenue growth will materialize from S. Korea. Management noted on the Q3 call (Nov 2017) that utilization in S. Korea had been increasing – which should be highly correlated to sales – and that the order book for 2018 is "dramatically larger than we've ever seen out of any one country". Additionally, SNWV mentioned that new clinical and published data should be forthcoming from S. Korea in both DFU as well as scar tissue (following C-section) – our experience is that positive and compelling published data is typically the single-most influential aspect of any sales/marketing strategy.

Another issue that management pointed towards that has hampered demand growth is longer-than-anticipated regulatory approval in many of the territories where SNWV recently signed distribution contracts. While SANUWAVE brought on distribution in six new territories during 2017, regulatory approval is still outstanding in many of these. We think another factor may be slower than anticipated adoption of SNWV's device in countries

where it has recently gained regulatory clearance. KOL-support and leading with clinical data is now at the forefront of marketing strategies, which may improve uptake.

Q4 OpEx was $1.46M, compared to $1.02M in Q4 2016 and $742k in Q3. Most of the increases relate to SG&A, which came in at $1.1M in Q4 – up from $939k and $475k in the year and quarter-earlier periods, respectively. For the full year, OpEx was $4.3M, compared to $3.8M in 2016. With some incremental headcount additions planned throughout 2018 – which could include positions in R&D/clinicals, reimbursement/billing, sales and accounting – as well as implementation of the initial U.S. strategy, we think operating expenses will increase during the year. But, also expecting meaningful sales growth, we think at least a portion of the incremental cost will be offset.

Cash balance was $730k at year-end. Cash used in operating activities was $584k and $1.53M ($969k and $3.39M ex-changes in working capital) in the three and twelve months ending December 31, 2017, compared to $490k and $3.2M ($196k and $2.70M ex-changes in working capital) in the year-earlier comparable periods. SNWV raised almost $2.1M in cash via the issuance of convertible and other debt during 2017 and another $1.4M subsequent to year-end. The (up to $1M) NFS equipment financing line will be used to launch SNWV's U.S. strategy. Additional cash could come from warrant exercises – 102M common shares worth of warrants are currently in-the-money (with exercise prices of $0.11 or less), all of which expire by March 2019. In addition, if and when SNWV inks another JV agreement, similar to that of MundiMed, upfront fees could be another source of funds.

U.S. Strategy:
In February SNWV announced what effectively was the kick-off of their U.S. strategy – including securing non-dilutive equipment financing and a commercialization partnership with Premier Shockwave focused on the VA, Indian Health Service (IHS) and U.S. military treatment facilities.

SNWV has had a long relationship with **Premier Shockwave**, which currently offers orthopedic pain therapy (for ailments such as tennis elbow and plantar fasciitis) via treatment with SANUWAVE's OssaTron device. Mike Stolarski, principal of Premier, has similarly had a long relationship with SNWV, including serving (from 2005 – 2008) as the company's V.P. of Business Development prior to joining SNWV's board of directors in 2016.

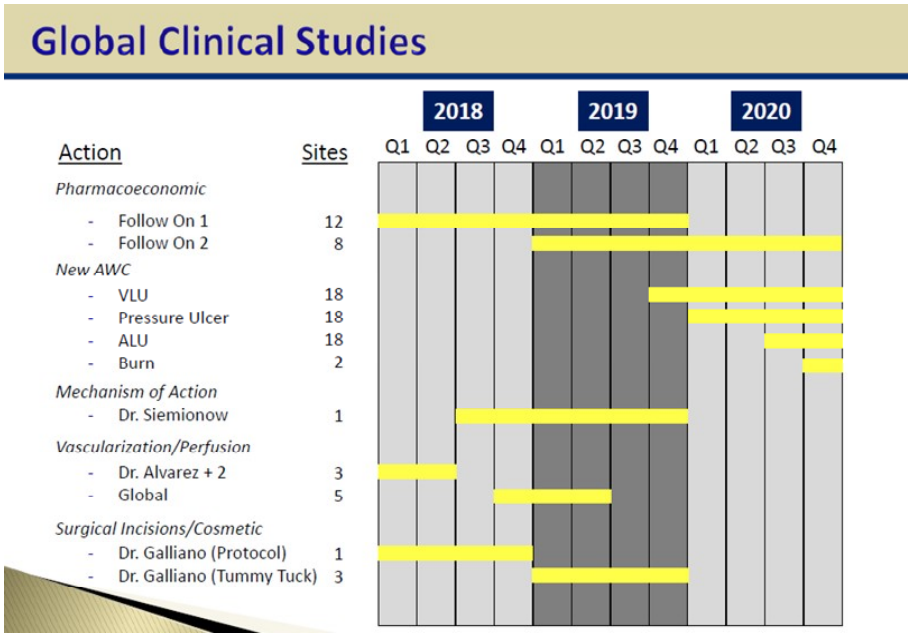
Under this new deal, Premier will purchase the dermaPACE equipment from SNWV and then be responsible for placing the machines. Per-procedure revenue will be split between SNWV and Premier. While detailed terms were not disclosed, we think a small margin on the equipment and somewhere in the range of 5% - 15% of the per-procedure fee would not be unreasonable for SNWV.

Per the P.R., the agreement calls for Premier to purchase at least 100 units over three years. Entry into the VA channel will first require acceptance on the GSA Schedules. IHS's Biomedical Equipment Governance Committees oversee medical equipment purchasing and related decisions for that organization. Management mentioned on the call that they have already shipped initial devices to Premier and that they expect Q1 to include initial U.S. related revenue.

We think this partnership could (over time) prove meaningful from a revenue, cash flow and margin perspective. More significant, however, (at least in the very near-term) is that the partnership facilitates initial entry of dermaPACE into the U.S., provides early awareness and, hopefully, also generates clinical experience – which can be critical in helping to drive further adoption as well as (eventually) for reimbursement-related purposes.

Additional U.S. Strategy details…
On the Q4 call management expanded on additional details of their U.S. strategy. Their systematic approach includes "targeted initial rollout, product positioning, reimbursement, further clinical proof of effectiveness in treating DFUs, expanding indications and claims, and listening to the customer for product improvement." As we alluded to in our FDA Approval Note (Jan 5, 2018), with no dedicated or widespread reimbursement available, SNWV will need to pick their spots and do so with a focus on efficiency. Building the clinical data databases and generating awareness among wound-care influencers fit that mold – and appear to be high on the company's list of priorities. Management mentioned that they expect to initiate several studies in different indications and both in conjunction with, as well as against, other advanced DFU therapies. We expect to hear more specifics about their plans including study designs (initially these may be mostly case studies, but expect larger, robust RCTs to be in the gameplan as well) – in the meantime, SNWV's February 2018 investor presentation provides a current outline.

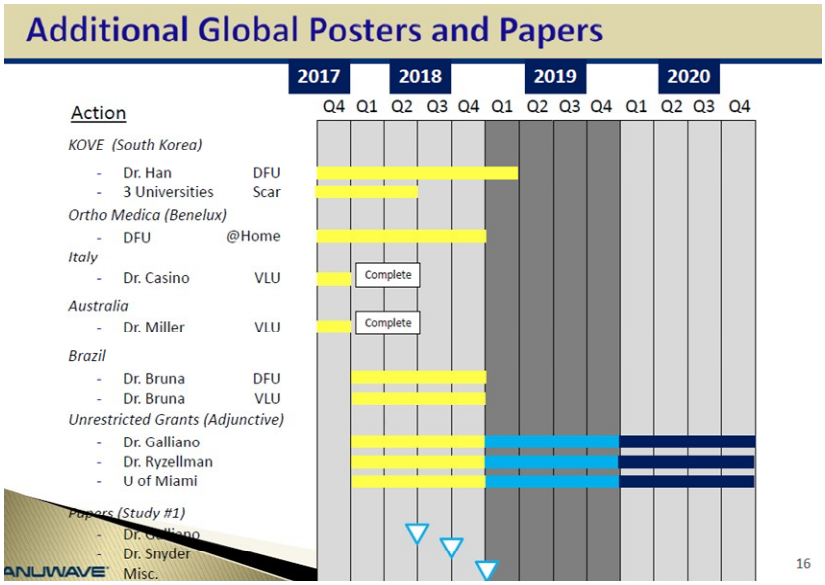
Expected Upcoming Clinical and Case Studies



SOURCE: SNWV Feb 2018 Investor Presentation

Awareness-building will include regular attendance at major wound care conferences. SNWV will look to have studies published and presented. KOL-engagement is a key strategy for launch of novel devices in the U.S. and expect SNWV to be active on that front as well including recruiting to lead clinical studies.

Expected Presentations and Publications



SOURCE: SNWV Feb 2018 Investor Presentation

In terms of U.S. reimbursement, novel devices often initially go to market in the U.S. sans-dedicated Medicare reimbursement. That'll be the case with dermaPACE. Initially, providers (perhaps, particularly influential KOLs) may have some success billing under a more generic CPT III code although we expect spotty reimbursement, at best, initially or at least until there is more usage data and perhaps, until following conclusion of supportive post-approval clinical utility and pharmacoeconomic studies. Eventual issuance of a CPT I code will likely be the goal, although that could be a years-long process and will undoubtedly require sufficient usage and economic data.

SNWV mentioned that they have brought on consultants to help with their initial reimbursement strategy – which will include picking certain regional payers and engaging with an evidence-based approach. Kick-off of SNWV's first

pharmacoeconomic study ("follow-on 1") is imminent, results of which are expected to help support their case to these regional payers. This is a topic that we will be eager to hear updates on given its outsized influence on whether a provider chooses to use a particular modality or therapy.

Competitive considerations….
Despite lack of available reimbursement, we think competitive differentiation of dermaPACE as compared to other advanced DFU therapies means dermaPACE may find meaningful interest and adoption. These planned follow-on studies will undoubtedly be aimed at demonstrating these competitive points of differentiation of dermaPACE to help drive initial adoption.

There are several types of advanced DFU wound therapies approved for sale in the U.S. The most common are NPWT (such as KCI's VAC) and skin substitutes, such Apligraft and Dermagraft. Growth factors (i.e. topicals), matrices and stem cells are other therapies that have been used in the treatment of DFU. Ultrasound and electrical stimulation have also been employed as has hyperbaric oxygen therapy.

Given that NPWT has been used for decades in the treatment of chronic wounds and much of the clinical evidence surrounding chronic wound therapy lies with it (i.e. NPWT) as well as the skin substitutes, these are the modalities which we view as the most meaningful competition to dermaPACE. All of these are more invasive, require greater skill to employ and are much more expensive than is treatment with dermaPACE. SNWV estimates cost of full treatment regimen with dermaPACE is approximately $3k, as compared to ~$15k for NWPT and ~$10k for skin substitutes.

We also note that while all of three of these other products did achieve 100% wound closure in their respective FDA pivotal trials, the practical efficacy difference as compared to dermaPACE may be much less meaningful. In their initial IDE trial, median closure in dermaPACE treated ulcers achieving > 90% closure was over 99% and anything greater than 70% indicates that the wound is well on its way to being completely healed. In addition, ulcers treated with dermaPACE were almost 60% larger than those in the control group (making achieving significance that much more difficult). Also noteworthy is that trial protocol in VAC's FDA study allowed for full closure of ulcers to be completed with surgery - this was not allowed in the dermaPACE study - had it and it's conceivable that dermaPACE would have shown statistical significance in 100% closure over standard of care. See our Appendix for more detail on our comparison of dermaPACE vs. these other therapies.

Also important is that dermaPACE will not necessarily need to compete directly with these or any other advanced DFU therapies given that wound healing is often a trial and error approach if one modality fails, the clinician will move to the next, and so on. While the initial goal is to heal the wound as fast as possible, the ultimate goal is to at least eventually heal it and avoid amputation. But, the more competitive the product, likely the better chance it has to be closer to the front in the continuum of care. We think this type of application, that is, dermaPACE in conjunction with legacy advanced DFU therapies - especially for wounds that fail to close (with amputation as potentially the only other option), may represent one of the more receptive initial markets for SNWV's device. Importantly, given its non-invasive nature, dermaPACE is the only advanced DFU therapy that can be used in conjunction with another advanced DFU therapy.

Model:
We approached modeling U.S. revenue two different ways, one based on market penetration and the other based on unit placements. Our model incorporates three cases; conservative, base and liberal – which are based on assumed margin (to SNWV), market opportunity, unit placements rate and number of treatments per console.

We incorporate the following assumptions (all of which are subject to updating);

Market penetration model:

Market size:
  - maximum market (i.e. liberal case): 1M patients per year
  - minimum market (i.e. conservative case): 240k patients per year
  - base market: avg of the two
  - market grows at 1%/year
- Penetration: insignificant in 2018, penetration increases by 1% per year
- Number of treatments: assume an avg of 6 treatments per patient for all cases
- Margin per treatment to SNWV:
  - $100 liberal, $75 base, $50 conservative

		2018	2019	2020	2021	2022	2023
Market size							
	liberal	1,000,000	1,010,000	1,020,100	1,030,301	1,040,604	1,051,010
	base	620,000	626,200	632,462	638,787	645,174	651,626
	conservative	240,000	242,400	244,824	247,272	249,745	252,242
Penetration	liberal	0.3%	1.0%	2.0%	3.0%	4.0%	5.0%
	base	0.3%	1.0%	2.0%	3.0%	4.0%	5.0%
	conservative	0.3%	1.0%	2.0%	3.0%	4.0%	5.0%
Treatments	liberal	20,000	60,600	122,412	185,454	249,745	315,303
	base	12,400	37,572	75,895	114,982	154,842	195,488
	conservative	4,800	14,544	29,379	44,509	59,939	75,673
Margin	liberal	$100	$101	$102	$103	$104	$105
	base	$75	$76	$77	$77	$78	$79
	conservative	$50	$51	$51	$52	$52	$53
Revenue	liberal	$2,000,000	$6,120,600	$12,487,248	$19,107,363	$25,988,561	$33,138,664
	base	$1,120,000	$3,427,536	$6,992,859	$10,700,123	$14,553,594	$18,557,652
	conservative	$240,000	$734,472	$1,498,470	$2,292,884	$3,118,627	$3,976,640

Unit placements model:

Utilization:

- on the low end (i.e. conservative), we assume one treatment per console per day and an average of 6 treatments per patient (equal to ~4 patients per console per month)
- on the high end (i.e. liberal), we assume two treatments per console per day and an average of 6 treatments per patient (equal to ~8 patients per console per month)
- base case is the average of the two

- Margin per treatment to SNWV:
  - $100 liberal, $75 base, $50 conservative

		2018	2019	2020	2021
Consoles	liberal	20	100	200	300
	base	15	70	130	195
	conservative	10	40	60	90
Patients/console/mth	liberal	7	11	16	25
	base	6	8	13	19
	conservative	4	6	9	14
Treatments	liberal	10,555	79,164	237,492	534,357
	base	6,118	48,222	138,186	310,919
	conservative	2,880	17,280	38,880	87,480
Margin	liberal	$100	$101	$102	$103
	base	$50	$76	$77	$77
	conservative	$50	$51	$51	$52
Revenue	liberal	$1,055,520	$7,995,564	$24,226,559	$55,054,855
	base	$599,760	$4,434,102	$13,104,817	$29,780,696
	conservative	$144,000	$872,640	$1,983,074	$4,506,537

Based on our belief that the early years of U.S. commercialization will be based on “picking their spots” based on hospitals, regional payers, wound centers and clinics as well as KOLs where reimbursement may be most favorable, we think the unit placement model may be most appropriate as a guide. This is also the reason why we do not extend this model past the year 2021.

We reiterate that our model is subjecting to updating. It will almost certainly change based on when there is more definitive information to make more informed judgments about inputs. And while we assume conservative, base and liberal cases, our inputs for each should not be interpreted to mean that, for example, margin cannot significantly exceed $100 per treatment.

Meanwhile, we have OUS revenue growing from $738k in 2017 to $1.6M in 2018 and to just under $4M in 2021.

Valuation

We have used P/S comp as our valuation methodology – for consistency, we continue to use that. Smith & Nephew has traded at approximately 3x analyst's forecasted forward revenue. With the updates to our model, we have SNWV generating approximately $34M (including JV revenue – which on GAAP basis will be accounted for as a component in equity interest calculation) in revenue in 2021 - based on the 2021 3x P/S multiple, this values SNWV's equity at about $100M, or $0.75/(basic)share.

FINANCIAL MODEL

SANUWAVE Health, Inc.

	2016 A	Q1 A	Q2 A	Q3 A	Q4 A	2017 A	Q1 E	Q2 E	Q3 E	Q4 E	2018 E	2019 E	2020 E	2021 E
Total Revenues	$1,376.1	$149.6	$111.0	$161.6	$316.3	$738.5	$347.0	$445.0	$674.0	$851.0	$2,317.0	$7,008.1	$17,081.8	$33,997.7
YOY Growth	*42.5%*	*-44.5%*	*-45.4%*	*-36.8%*	*-51.2%*	*-46.3%*	*132.0%*	*300.7%*	*317.1%*	*169.0%*	*213.7%*	*202.5%*	*143.7%*	*99.0%*
Cost of Revenues	$565.1	$55.14	$24.7	$61.7	$100.5	$242.0	$115.6	$145.2	$218.0	$270.9	$749.7	$2,188.9	$5,295.36	$10,471.29
Gross Income	$810.9	$94.4	$86.4	$99.9	$215.9	$496.6	$231.4	$299.8	$456.0	$580.1	$1,567.3	$4,819.2	$11,786.5	$23,526.4
Gross Margin	*58.9%*	*63.1%*	*77.8%*	*61.8%*	*68.2%*	*67.2%*	*64.2%*	*66.0%*	*67.0%*	*67.0%*	*67.6%*	*68.8%*	*69.0%*	*69.2%*
R&D	$1,128.6	$260.3	$437.9	$266.8	$327.4	$1,292.5	$362.0	$466.0	$501.0	$449.0	$1,778.0	$2,026.0	$2,285.0	$2,551.0
%R&D	*82.0%*	*174.1%*	*394.4%*	*165.1%*	*103.5%*	*175.0%*	*104.3%*	*104.7%*	*74.3%*	*52.8%*	*76.7%*	*28.9%*	*13.4%*	*7.5%*
SG&A	$2,673.8	$448.6	$951.9	$475.4	$1,128.5	$3,004.4	$695.3	$928.0	$1,328.0	$1,472.0	$4,423.3	$5,914.8	$12,726.0	$23,118.4
% G&A	*194.3%*	*299.9%*	*857.2%*	*294.2%*	*356.8%*	*406.8%*	*200.4%*	*208.5%*	*197.0%*	*173.0%*	*101.6%*	*84.4%*	*74.5%*	*68.0%*
Depreciation	$19.9	$6.1	$6.0	$5.5	$6.6	$24.1	$6.2	$6.0	$6.0	$6.8	$25.0	$75.0	$92.0	$108.0
Operating Income	($3,316.5)	($620.6)	($1,309.4)	($647.8)	($1,246.6)	($3,824.5)	($832.1)	($1,100.2)	($1,379.0)	($1,347.7)	($4,659.0)	($3,196.6)	($3,316.5)	($2,251.0)
Operating Margin	*-241.0%*	*-415.0%*	*-1179.2%*	*-400.9%*	*-394.1%*	*-517.9%*	*-239.8%*	*-247.2%*	*-204.6%*	*-158.4%*	*-201.1%*	*-45.6%*	*-19.4%*	*-6.6%*
Total Other Expense	($3,121.5)	$127.1	($106.5)	($203.5)	($1,530.6)	($1,713.5)	($927.0)	($936.0)	($442.0)	($425.0)	($2,730.0)	($1,300.0)	($1,300.0)	($1,300.0)
Pre-Tax Income	($6,438.0)	($493.5)	($1,415.9)	($851.3)	($2,777.2)	($5,538.0)	($1,759.1)	($2,036.2)	($1,821.0)	($1,772.7)	($7,389.0)	($4,496.6)	($4,616.5)	($3,551.0)
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
Tax Rate	*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	($6,456.9)	($493.5)	($1,415.9)	($851.3)	($2,777.2)	($5,538.0)	($1,759.1)	($2,036.2)	($1,821.9)	($1,773.5)	($7,390.7)	($3,930.3)	($3,814.4)	($2,383.5)
YOY Growth	*33.9%*	*-71.3%*	*25.5%*	*-25.5%*	*12.6%*	*-14.2%*	*-72.8%*	*312.6%*	*28.7%*	*108.3%*	*33.5%*	*-46.8%*	*-2.9%*	*-37.5%*
Net Margin	*-469.2%*	*-330.0%*	*-1275.1%*	*-526.9%*	*-878.0%*	*-749.9%*	*-506.9%*	*-457.6%*	*-270.3%*	*-208.4%*	*-319.0%*	*-56.1%*	*-22.3%*	*-7.0%*
EPS (continuing ops)	($0.06)	($0.00)	($0.01)	($0.01)	($0.02)	($0.04)	($0.01)	($0.01)	($0.01)	($0.01)	($0.05)	($0.02)	($0.01)	($0.01)
Diluted Shares O/S	107,620	138,042	138,993	139,100	139,179	138,828	140,000	152,200	165,000	188,000	161,300	244,000	270,000	315,000

Brian Marckx, CFA

HISTORICAL ZACKS RECOMMENDATIONS

DISCLOSURES

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