Zacks Small-Cap Research

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Semler Scientific (SMLR-NASDAQ)

SMLR: Firing On All Cylinders as WellChec & Instruments Remain On A Tear

Current Recommendation	**Buy**
Prior Recommendation	N/A
Date of Last Change	01/04/2015
Current Price (11/03/15)	$3.36
Target Price	**$7.00**

OUTLOOK

Highly experienced mgmt team has had early success with strategic marketing plan that leverages recent changes in healthcare reimbursement from pay for service to pay for performance. QuantFlo use benefits providers, patients and insurers which has catalyzed demand for the device and resulted in three-year revenue CAGR of 120%+.

WellChec, SMLR's wellness testing service launched in Spring 2015 and is already making a significant revenue contribution. WellChec continues to score add'l contracts and is adding new tests to its menu of offerings which should push its sales even higher. This coupled with QuantaFlo's growing installed base, additional Medicare Advantage plan customers and higher avg revenue per customer on the instruments' side bodes well for continued robust top-line growth for the foreseeable future.

SUMMARY DATA

52-Week High	**$6.90**
52-Week Low	**$1.92**
One-Year Return (%)	**65.23**
Beta	**-1.26**
Average Daily Volume (sh)	**8,031**
Shares Outstanding (mil)	**5**
Market Capitalization ($mil)	**$17**
Short Interest Ratio (days)	**1.37**
Institutional Ownership (%)	**14**
Insider Ownership (%)	**22**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2015 Estimate	**N/A**
P/E using 2016 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**Above Avg.,**
Type of Stock	**Small-Growth**
Industry	**Med Instruments**

ZACKS ESTIMATES

Revenue
(in '000s of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2014	837 A	846 A	897 A	1055 A	3635 A
2015	1202 A	1303 A	1562 A	1745 E	5812 E
2016					7910 E
2017					10402 E

Earnings per Share

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2014	-$0.36 A	-$0.22 A	-$0.31 A	-$0.25 A	-$1.10 A
2015	-$0.29 A	-$0.27 A	-$0.32 A	-$0.24 E	-$1.12 E
2016					-$0.57 E
2017					-$0.29 E

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

WHAT'S NEW…

Q3 2015 Results: Another Revenue Record As Both WellChec and Instruments Biz Remain on a Tear …

Semler reported financial results for the third quarter ending September 30. Déjà vu in terms of the top-line as SMLR set another revenue record with Q3 marking at least the 10th straight quarter of sequential sales growth. This was also the fourth consecutive quarter where SMLR beat our respective revenue estimate. And on a yoy basis, revenue has increased by at least 35% (and by as much as 95%) every quarter since Q1 2014. And importantly, there are other near-term catalysts that could steepen the already robust top line growth including new and larger contracts in the recently launched WellChec diagnostic testing service, introduction of the next-gen PAD testing instrument (QuantaFlo) which is rolling out now, further penetration of Medicare Advantage plans (i.e. - customer penetration) and ever-increasing order sizes.

Q3 revenue of $1,562k was up 75% yoy, up 20% sequentially and about 12% ($171k) better than our $1,391k estimate. This marks the fourth straight quarter of beating our estimate (by at least 7%) since we initiated coverage of the company in Q4 2014. WellChec continues to contribute a larger portion of total revenue, generating almost 10% of total sales in Q3, up from about 6% through the first six months of the year. WellChec revenue was approximately $150k in Q3 (equal to all of the 1H) – as we were looking for $100k, this accounts for about 29% of the beat to our total revenue estimate.

The Q3 WellChec revenue came from the company's second contract, which was partially filled in the quarter but should also significantly benefit Q4. The second contract was about twice the size of the first – penned in the Spring. SMLR also noted on the call that they signed several more WellChec contracts in Q3 and they continue to expand the number of tests offered in the service – both of which should help layer on additional revenue in Q4 and going into 2016. Management expects Q4 WellChec revenue to grow from the ~$150k generated in Q3 – we currently model $200k in Q4, which might prove conservative given the apparent early success of the program and resultant rapid top-line growth.

And the PAD-testing instrument business also continues to grow at an impressive rate, turning in approximately 57% yoy and 13% sequential growth in Q3. Revenue growth is coming from a combination of a greater installed base (up 44% yoy) and higher average revenue per unit (up 5% yoy). SMLR also continues to be successful in bringing on additional payers – noting on the call that a Medicare Advantage plan that had been in a pilot program earlier in the year migrated over to customer status during the quarter.

QuantaFlo, the company's next-gen and higher-priced instrument, launched in Q3 and has the potential to shift the instrument business growth curve even higher. SMLR will look to upgrade existing accounts currently using FloChec and will only be shipping QuantaFlo to new licensing contracts. Per management's comments on the Q3 call, QuantaFlo has received "excellent feedback" since the initial launch.

Margins, Expenses, EPS

Gross margin came in quite a bit in Q3 – which looks to be largely related to WellChec. GM was 75.4% in Q3, this compares to 81.3% in Q2 of this year and 80.2% in the year-earlier comparable period. We did not anticipate the meaningful contraction in GM, in fact we had expected that WellChec would deliver higher, not lower margins as compared to the instruments business.

The services provided through WellChec includes SMLR's PAD (vascular disease) test using FloChec/QuantaFlo which carries margins at 80% or better. But following the initial introduction of WellChec earlier this year SMLR has expanded the types and number of tests provided through this wellness testing and diagnostics service. Some of these additional tests, as management explained on the Q3 call, generate significantly lower margins. The recent evolution from mostly PAD testing during initial introduction to layering on additional (lower margin) tests since then appears to be reflected in the over 700 basis point contraction in GM from the first half of 2015 (81.5%) to the third quarter (75.4%).

So, as management mentioned on the call, as WellChec grows to contribute a larger share of total revenue, gross margin may be susceptible to contracting further. However, there a few moving parts in the cost of services line which could prove a little more dynamic over time. This includes the fact that QuantaFlo is higher priced than is FloChec (which should benefit GM), there should be some opportunity to scale some of the costs in WellChec with greater volume and SMLR may be able to incorporate additional tests in the future that are more profitable - all of these could have the effect of benefitting GM. But this will be something to keep an eye on. We currently model

additional incremental contraction in GM in Q4 and for the full year 2016 (as compared to 2015) but for it to begin to level out in about 12 months.

Relative to Q3 operating expenses – OpEX came in at $2.73M (175% of revenue) which is up from $2.37M (182% of revenue) in Q2 and an average of $2.04M (188% of revenue) in 1H 2015. Q3 OpEx was also significantly higher than our $2.34M (168% of revenue) estimate. The jump (and difference compared to our estimate) in operating expenses is almost completely attributable to share based compensation expense of $486k in Q3 – which compares to just $30k in Q2 and $63K in 1H 2015. Management noted on the call that they don't expect this most recent level of stock compensation to be a regular occurrence and expect Q4 OpEx to come down to more normalized levels.

Net loss and EPS were $1.6M and ($0.32). Excluding the (non-cash) stock compensation expense, net loss and EPS were $1.1M and ($0.22), a hair better than our $1.2M and ($0.23) estimates.

During Q3 SMLR repaid their $2M credit line and exited the quarter with zero debt and $1.9M of cash. They used a combined $442k in operating and investing activities (the latter includes $223k of instruments for lease) in the quarter and a total of $3.2M in the first nine months of 2015. The burn rate is consistent with what we had expected. Assuming a similar average burn rate going forward, the current cash balance represents just under six months worth of operating funds. We had previously and still continue to incorporate the assumption that SMLR raises additional funds via the sale of common equity – although we have no particular insight into what the form of a future financing will be.

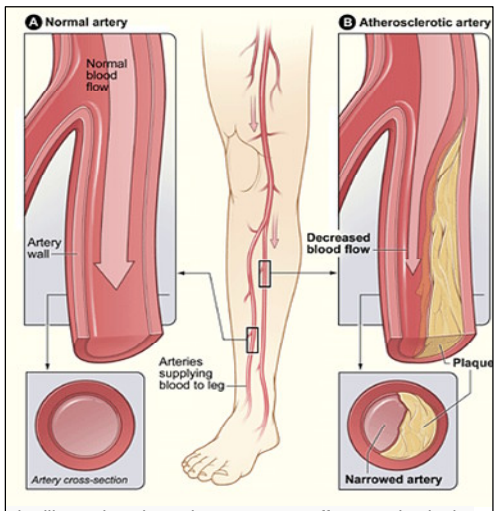
BACKGROUND

Peripheral Artery Disease: *Widespread, under-reported, high-risk and costly to treat..*

Arterial blood flow measurement is routine in the assessment of vascular health. PAD is a form of vascular disease whereby build-up of plaque causes ischemia in the legs. In the U.S. it is estimated to affect as many as 10 million, or about 20% of people age 65 and older and as many as 18 million Americans over the age of 50. Incidence is positively correlated with age and other risk factors such as obesity. Given the ageing population and trend towards more sedentary lifestyles, incidence of PAD will almost certainly continue to grow. Despite the high incidence, most cases of PAD go undetected with studies indicating about 75% of cases go undiagnosed.

Certain factors increase the likelihood of being affected by PAD. These include smoking, diabetes, older age, hypertension and known arterial disease, among others. Presence of PAD also significantly increases the likelihood of experiencing adverse cardiovascular events such as having a heart attack or stroke. A large study published in the Journal of the American Medical Association showed patients with PAD had a 21% chance of dying, having a heart attack or stroke or being hospitalized with cardiovascular complications within one year.

And while PAD isn't necessarily a life or death proposition, risk of severe complications, including death, increases with severity of the disease. Even patients with relatively mild cases, which typically will not develop into severe ischemia, are at an approximate 3x - 4x increased risk of dying from cardiovascular reasons as compared to non-PAD individuals. About 20% of PAD patients suffer from the most advanced stage of the disease, called critical limb syndrome - these patients have a 25% chance of dying and 30% chance of requiring leg amputation.



The illustration shows how PAD can affect arteries in the legs. Figure A shows a normal artery with normal blood flow. The inset image shows a cross-section of the normal artery. Figure B shows an artery with plaque buildup that's partially blocking blood flow. The inset image shows a cross-section of the narrowed artery.

SOURCE: NHLBI, Wikipedia.com

An initial symptom of PAD is claudication (Latin for "limping") which is pain or numbness caused by the lack of sufficient blood flow in the legs. Claudication may be more acute when walking. Other symptoms of PAD can include sores or wounds that will not heal and bluish tint or coolness of the legs - all of which are caused by the poor circulation from the accumulation of plaque in the arteries.

PAD Symptom



SOURCE: fashion-writings.com

Like almost any chronic disease, treatment is easier and more effective when the condition is found at an earlier stage. Less severe cases can often be effectively treated with medication and certain lifestyle modifications that could include stopping smoking, healthier diet and regular exercise. Later stage PAD may require more substantial intervention including invasive procedures such as angioplasty, which involves widening the arteries via threading a balloon catheter into the narrowed artery, or plaque excision whereby plaque is scraped off of the arterial wall. At the most severe stage, such as when gangrene has begun to set in, amputation may be necessary.

PAD is not only a serious health risk for the individuals suffering from the condition, it is also a serious cost to the overall healthcare system. According to the Sage Group, a research company with a focus on atherosclerotic disease in the lower limbs, PAD costs the U.S. healthcare system between $164 billion and $290 billion per year and is more costly than any other major chronic disease, including diabetes and heart disease. Mary Yost, President of Sage Group, indicates that one reason for the high cost to treat PAD is that the condition needs to be diagnosed at an earlier stage than what is the case today. She notes that ~75% of PAD patients are asymptomatic yet typically not tested due to lack of obvious symptomatic patient complaints and Medicare reimbursement guidelines. These asymptomatic patients eventually become just as costly to treat as symptomatic PAD patients

and therefore, earlier diagnosis of these asymptomatic patients represents an opportunity to reduce future complications as well as related healthcare costs.[1]

Major medical organizations are on the front lines of building awareness and communicating the serious of the disease. In fact the American College of Cardiology, the American Heart Association and the American Diabetes Association all agree that individuals over the age of 65 (as well as those over 50 with a history of smoking or heart disease) should be tested for vascular disease.

Traditional PAD Testing Methods Fail To Identify Asymptomatic Patients

Currently, most cases of PAD are not identified until after obvious symptoms are already present. This is likely due to a number of factors including that testing for symptomatic patients will be covered under Medicare reimbursement guidelines, the relatively high expertise required to perform traditional PAD testing methods and lack of widespread availability of PAD testing in the primary care setting.

This complex testing is typically done at specialist vascular centers or imaging labs, not at the primary care physician's office where an initial symptomatic diagnosis usually occurs. With chronically sick individuals, and particular those with mobility difficulties as is the case with many PAD patients, the lack of testing at the initial point of care can result in many patients foregoing a definitive diagnosis which results in further progression of the disease and resultant incremental complications. And the other advantage of being able to test at the initial point of care is that while a patient may not present with obvious symptoms, more subjective symptoms such as a mild functional impairment which may have been thought to be unrelated to PAD may provoke a primary care doctor to investigate further, including the use of a PAD test, if available.

Doppler ABI…

The standard for PAD testing is Doppler ABI, which has been shown to be highly effective in identifying the condition. Ankle Brachial Index is used to determine the presence of ischemia in the legs by comparing the blood pressure in the arms (which generally do not have arterial blockage) to the blood pressure in the lower legs. Specifically, ABI is calculated by dividing the systolic (i.e. - when the heart beats) blood pressure near the ankle by the systolic blood pressure in the arm. The Mayo Clinic guidelines for ABI values are; 1.0 - 1.4 indicates no blockage, 0.5 - 0.79 moderate blockage and < 0.5 severe blockage (with interim values corresponding to a representative degree of blockage).

Doppler ABI



SOURCE: medicalexpo.com

The procedure uses a conventional blood-pressure cuff and a Doppler wand. Doppler is used in all modern ultrasound scanners and used during an ABI procedure to determine whether blood is moving towards the wand. During the procedure the cuff is inflated until the pulse in the artery is stopped - the Doppler wand is used to determine when the pulse ceases. The cuff is then slowly deflated and a blood pressure measurement is recorded at the time that the Doppler wand redetects a pulse. This is done on both arms and on both ankles which provides the inputs to the ABI calculation.

ABI with Doppler is typically done at vascular center due to the complexity of using a Doppler wand and the cost to hire a trained technician, which can be prohibitive for a primary care practice that may not have sufficient PAD-related patient flow to make the economics work.

Another drawback to Doppler ABI is that it can produce inconclusive results in patients which have arteries that are incompressible arteries. Arterial calcification, or hardening of the arteries, can make them non-compressible and therefore procedures which rely on the use of a blood pressure cuff, such as Doppler ABI, may produce unreliable results. As FloChec does not use a blood pressure cuff it can be used with all patients, including those with incompressible arteries.

Duplex Ultrasound Scanning…

Doppler ABI represents the first-line PAD diagnostic and has been considered highly reliable in diagnosing the disease. If an even more definitive diagnosis is desired duplex ultrasound scanning (DUS) can be used. Duplex

[1] The Sage Group. Yost MA, Withersspoon H. *In Recognition of National Peripheral Artery Disease (PAD) Awareness Month, THE SAGE GROUP Comments on the Costs and Consequences of the Disease.* Business Wire, Sept 8, 2014

ultrasound imaging can also identify the location and degree of blockage and, therefore, is useful in finding the best location for access for revascularization.

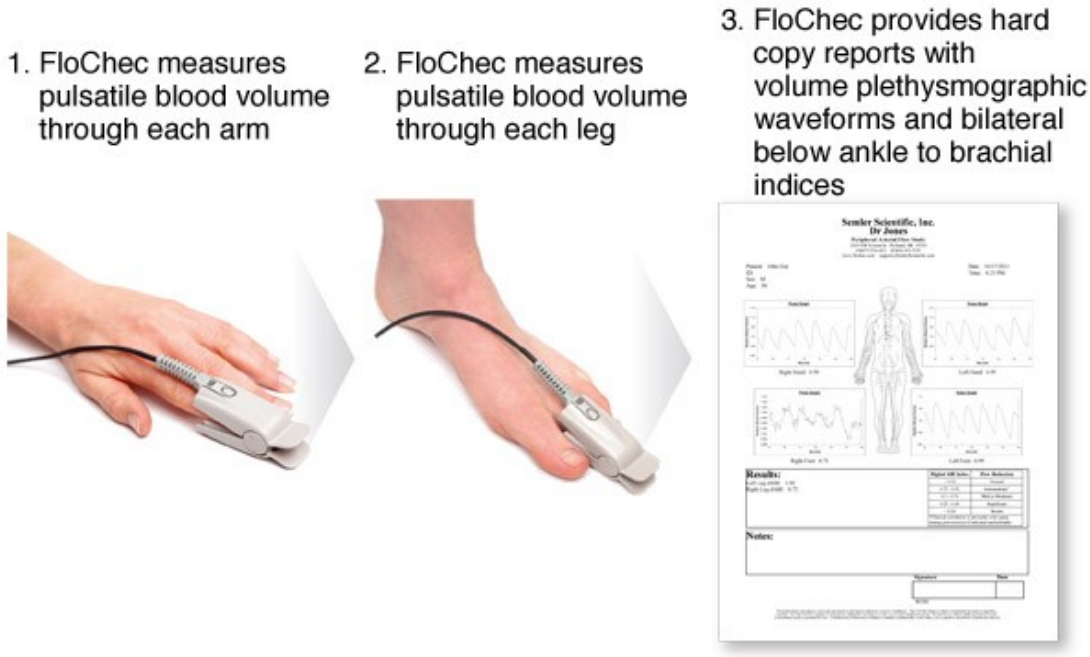
DUS is a combination of traditional ultrasound and Doppler ultrasound. While Doppler ultrasound uses sound waves to determine blood flow, traditional ultrasound uses sound waves to form pictures of the blood vessels. The combination allows a physician to see where the blockage is and the speed and direction of the blood flow. DUS is typically done in an ultrasound lab and takes approximately 30 minutes to complete. Cost of DUS, at approximately $700, is significantly more expensive than ABI.

FloChec Digital ABI: *Accurate and Simple To Use, Ideal For Primary Care Setting…*

The FloChec Volume Plethysmography Device also uses the ABI index to diagnose PAD but, unlike Doppler ABI, uses a much simpler to use technology with performance on-par or better than its more complex counterpart. High accuracy, low cost and ease of use could make it ideal for use in the primary care setting.

FloChec consists of a sensor clamp which is attached to the finger when the upper extremity blood flow is being measured and the toe when the lower extremity blood flow is being measured. LED light is emitted from the clamp into the digit and reflected back by the blood cells into the clamp sensors. The amount of blood volume in the digit affects the amount of light that is reflected back, the characteristics of which are measured by proprietary algorithms. Similar to Doppler ABI, both left and right extremities are measured, however, unlike Doppler ABI which takes approximately 15 minutes to complete, FloChec measurements can be performed in about four minutes.

These blood flow measurements are then instantly constructed into a waveform by the software and can be displayed on a computer monitor or printed in hard copy. Output consists of either "Flow Obstruction", "Borderline Flow Obstruction" or "No Obstruction". The simplicity of the procedure as well as the fully-automated output means there requires very little training - which, again, is a major point of difference as compared to Doppler ABI. The ease of use and interpretability of FloChec allows the procedure to be performed by a relatively low-level, low-cost technician or medical aide.



SOURCE: semlerscientific.com

FloChec received FDA 510(k) clearance in February 2010. The agency cited the Hokanson EC-6 and Parks Medical Mini-Lab devices as the predicate devices that FloChec was substantially equivalent to. FloChec is protected by a single issued U.S. patent (granted in 2009) with three other U.S. patents currently pending.

Abstract of the issued patent is; *A lightweight portable probe or transducer containing a transmissive or reflective electro-optical emitter and receptor in the infrared spectrum is fitted on a subject's finger or toe. Associated electronics energize and monitor the probe, detect cardio-rhythmic fluctuations therefrom, and process digital data over a prescribed window to produce a non-invasive, qualitative or quantitative measure of the subject's circulation.*

In accordance with one embodiment of the invention, a simple tri-color LED array is used to indicate the subject's circulation as being normal, reduced, or borderline.[2]

FloChec Clinical Data

SMLR has evaluated FloChec in two recent clinical studies. One compared the accuracy of the device to Doppler ABI in the identification of PAD while the other evaluated FloChec's ability to find undiscovered PAD cases in the primary care setting. These output measures of both trials closely correspond to the potential competitive advantages of FloChec as compared to alternative PAD testing devices.

> 632-Patient Undiscovered PAD in Primary Care Study

The goal of the study was to evaluate the performance of FloChec in the primary care setting, SMLR's target market and where many of the asymptomatic PAD cases may be being missed do to limited use of PAD diagnostics, including Doppler ABI. This was not a comparator study with FloChec as the only treatment device. Instead, data from other unrelated PAD studies and PAD prevalence rates were used for comparison purposes and a general guide as to the performance of FloChec. So while the study was not designed nor intended to be a pivotal trial or to provide a robust data set to support firm efficacy conclusions, it did provide some insight into the performance of FloChec as results were consistent with historical clinical data and PAD prevalence rates.

A manuscript of the study titled, *Digital Ankle-Brachial Index Technology Used In Primary Care Settings To Detect Flow Obstruction: A Population Based Registry Study* was published in October 2013 in the peer-reviewed journal BMC Research Notes. Questionnaires were used at primary care practices to identify individuals with signs and symptoms that were considered as suspicious for PAD. 632 patients at 19 U.S. medical practices were included in the study and 627 were tested with FloChec. Mean age of all participants was 67 years. 95% of the patients tested had at least one risk factor, sign and/or symptom suspicious of PAD. The results were aggregated into a database. Results were considered "abnormal", or positive for PAD, if the FloChec-generated ABI score was <0.93 and "normal", or negative for PAD, if the ABI score was $\geq$0.93.

Results (see Appendix for full results) showed 12% (76/632) of all patients were considered abnormal, or positive for PAD based on FloChec ABI scores. This falls within the range of 4.3% - 16.8% historical PAD prevalence rates. Of those 60 years of age or older, FloChec showed higher rates of PAD, which is also consistent with other, unrelated clinical studies. Similarly, prevalence rates of risk factors among those patients reporting as positive for PAD with FloChec were consistent with earlier studies. Perhaps, interestingly the study showed 25% of patients with claudication were positive for PAD, yet were asymptomatic - this compares to 11% in an earlier, unrelated study. The asymptomatic population is where the majority of PAD cases reside yet go undiagnosed and where earlier intervention could provide significantly improved patient outcomes.

While the authors acknowledge limitations of the study including that there was no comparator such as Doppler ABI, they concluded that the results do support the use of FloChec for identification of patients at risk of PAD and that, compared to Doppler ABI which is not as well suited for the primary care setting, it may allow for earlier detection of the disease.

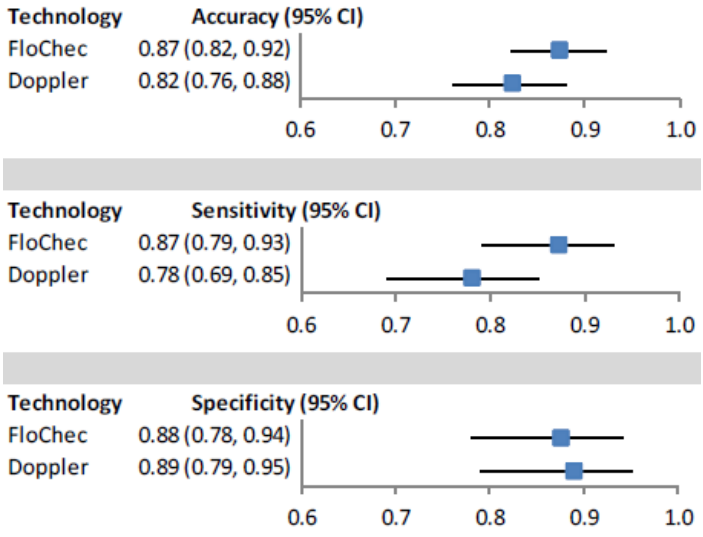
> 181-Limb Study Versus Doppler ABI

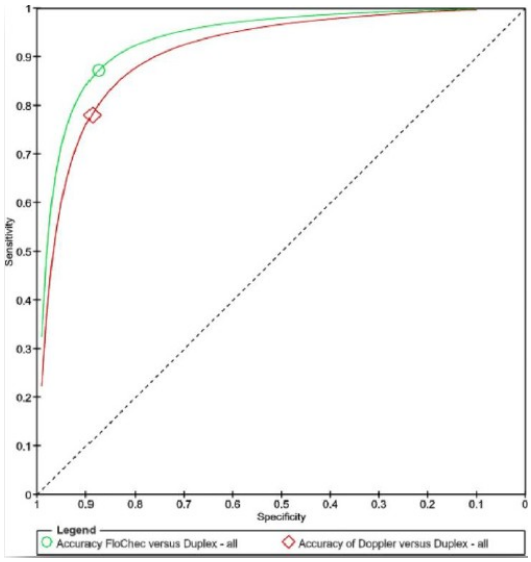
This study did use a comparator to evaluate FloChec in the diagnosis of PAD. 181 limbs from 121 patients were evaluated from five cardiovascular centers using both FloChec and Doppler ABI. Duplex ultrasound imaging was used as a definitive diagnosis. 95% confidence interval was used in the statistical analysis. Goal of the study was to compare the performance of FloChec versus that of Doppler ABI.

From November 2012 through May 2013 limbs were evaluated with each of these three methods. Each test from Doppler ABI and FloChec was compared to that from Duplex ultrasound with sensitivity, specificity and accuracy analyzed. In addition, receiver operating characteristic curves (ROC) were used - ROC curves are a visual measure of the accuracy results.

Results showed FloChec correctly identified 87% of the 181 limbs as either having disease or not having disease which compared to 82% for Doppler ABI. While the difference was not statistically significant, it trended in FloChec's favor. Accuracy, sensitivity and specificity findings as well as the ROC curve are below. Note that the closer the ROC curve (green = FloChec, red = Doppler ABI) is to the upper left, the more accurate the results are.

[2] U.S. Patent & Trademark Office



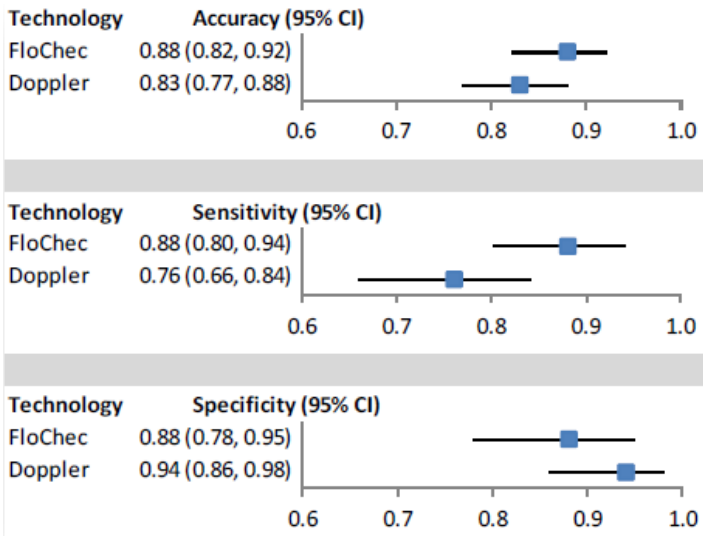


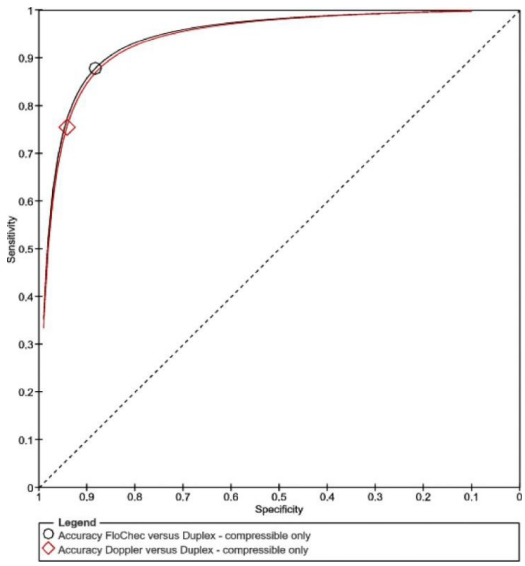
Results further showed that FloChec and Doppler ABI agreed in 78% (142 of 181) of limbs. Of the limbs where the methods did not agree, FloChec correctly identified diseased or non-diseased 62% of the time while Doppler ABI correctly identified only 38% of the time. While this difference with limbs where the methods did not agree is not statistically significant, it clearly does trend in FloChec's favor. And more importantly, the true positive rate is statistically significant (p=0.01) and also favors FloChec. FloChec's true positive rate was 68% versus 32% for Doppler ABI.

Sub-Analysis Also Favors FloChec…

A sub-analysis was also done. The sub-analysis included only limbs with compressible arteries. Arterial calcification, or hardening of the arteries, can make them non-compressible. Doppler ABI relies on a blood pressure cuff (while FloChec does not) in order to generate an ABI score and because of this, the results are known to be unreliable in patients with incompressible arteries. FloChec does not suffer from this drawback which means it can be used with all patients, providing it with yet another advantage over Doppler ABI.

There were 166 compressible limbs. Results showed FloChec correctly identified 88% of the 166 compressible limbs as either having disease or not having disease which compared to 83% for Doppler ABI. Accuracy, sensitivity and specificity findings as well as the ROC curve are below. The results indicate that FloChec is still more accurate then Doppler ABI when used on only compressible arteries.





SOURCE: semlerscientific.com

FloChec and Doppler ABI agreed in 80% (132 of 166) of the compressible limbs. Similar to the results of all limbs, of the compressible limbs where the methods did not agree, FloChec correctly identified diseased or non-diseased 62% of the time while Doppler ABI correctly identified only 38% of the time. And again, this difference is not statistically significant but does trend in favor of FloChec. Also the true positive rate for the compressible limbs was statistically significant (p=0.003) and favors FloChec. FloChec's true positive rate for compressible limbs was 73% versus 27% for Doppler ABI.

Results Indicate FloChec Is Competitive to Doppler ABI…
The results of the study indicate that performance of FloChec is on-par, or potentially superior to that of Doppler ABI. Also important to consider is that, as noted, Doppler ABI will often provide unreliable results in patients with incompressible arteries which is a limitation that FloChec does not suffer from and therefore provides Semler's device a competitive advantage in a real-world clinical setting. And this is in addition to the other advantages of FloChec which we detailed earlier including the relatively complex nature and long time of the Doppler procedure compared to that of FloChec.

Next-Generation Device Launched in Q3 2015
In March 2015, SMLR received FDA 510(k) clearance of its next-gen instrument, QuantaFlo (FloChec was cited as the predicate device). This next-gen instrument is compatible with electronic medical systems and also provides for enhanced labeling. The electronic medical records capability is of potential significant importance given incentives in Obamacare for healthcare providers (and penalties for non-compliance) to move away from paper to electronic records.

QuantaFlo, which is also higher priced than FloChec (and presumably carries higher margins), launched in Q3 and has the potential to shift the instrument business growth curve even higher. SMLR will look to upgrade existing accounts currently using FloChec and will only be shipping QuantaFlo to new licensing contracts. Per management's comments on the Q3 call, QuantaFlo has received "excellent feedback" since the initial launch.

WellChec Wellness Testing and Diagnostics

WellChec, A New Revenue Opportunity Already Making a Contribution
In early April 2015 SMLR launched WellChec, a diagnostic service that provides basic testing for certain diseases of the arteries, lungs, eyes, nerves and heart. The service looks to fill a niche which can provide an ala-carte menu of basic clinical tests for providers, offering one-stop-shopping and helping to free up physicians. WellChec launched with one test offering but has quickly expanded to several more. Semler is paid on a per-test basis and the more tests in the menu, the greater the revenue-per-patient potential.

Wellchec secured its first contract in March - which provided ~$150k in revenue and covered ~1k patients (~$150/patient). More importantly it provided initial validation that the service functions and that it very well could draw demand. A second contract, about twice the size of the first, came in August and contributed $150k in Q3 and is expected to make a meaningful impact in Q4 as well. SMLR noted on the Q3 call that they have secured several other contracts which have the potential to steepen the WellChec revenue curve even further going into 2016. A growing list of contracts, combined with regular additions of tests performed under the service should push WellChec's contribution to total revenue up from 10% today.

VALUATION / RECOMMENDATION

The recurring revenue model means that already established customers should provide a fairly stable base of business. Growth beyond that will come from expanding the number of customers, increasing order sizes and, potentially from greater contribution from new products and services, such as Wellchec. We have revenue growing in the high 30% in 2015 and graduating down to the low 30% in the out-year (2018) in our model. We think this is reasonable, or perhaps conservative, given the recurring revenue streams as well as the relatively much higher

historical revenue growth rates - including 89% in 2013 and 60% in 2014. In addition, other potential new products and services could also provide some upside.

We also expect to see much more scalability in operations as revenue grows. While management has indicated they will look to fill personnel needs as required with expansion of the company, we think the rapid revenue growth and beefy gross margins (although GM may temper some with growth in WellChec), coupled with the streamlined infrastructure, will result in significant improvement in OpEx leverage.

We use a 10-year DCF model to value SMLR. We model 10-year revenue CAGR of 30%, which again we think is reasonable if not conservative given the historical much higher rate of growth along with the recurring revenue model and significant further opportunities for growth. We show gross margins contracting through 2016 with steepeing growth of WellChec but then leveling out, scaling operating expenses consistent with growing revenues and efficiencies in SG&A. Our 10-yr DCF model, which uses an 11% discount and 2% terminal growth rate, values SMLR at approximately $7.00/share. This equates to a price/sales (2015) multiple of about 6.0x which we think is a fair given the company's high revenue growth rate, low revenue volatility, big gross margins, scalability of operations and lower-risk business model (i.e. - licensing, outsourced manufacturing and R&D). We also assign real value to the quality of management.

We think fair value is $7.00/share which is significantly greater than the current market value. Our recommendation is Buy.

APPENDIX

632-Patient Study Population and Results[3]

Table 2 Summary of study population demographics, signs/symptoms, and risk factors

Measure	All subjects		PAD negative subjects		PAD positive subjects	
	Mean ± SD (N) or % (n/N)	95% CI	Mean ± SD (N) or % (n/N)	95% CI	Mean ± SD (N) or % (n/N)	95% CI
Age (years)	67.2 ± 13.8 (627)	66.1, 68.3	67.1 ± 13.9 (551)	65.9, 68.2	68.2 ± 12.9 (76)	65.2, 71.1
Age group (years)						
<50	10.7% (67/627)	8.3%, 13.1%	10.7% (59/551)	8.1%, 13.3%	10.5% (8/76)	3.6%, 17.4%
50-59	17.7% (111/627)	14.7%, 20.7%	18.5% (102/551)	15.3%, 21.8%	11.8% (9/76)	4.6%, 19.1%
60-69	25.5% (160/627)	22.1%, 28.9%	25.0% (138/551)	21.4%, 28.7%	28.9% (22/76)	18.8%, 39.1%
70+	46.1% (289/627)	42.2%, 50.0%	45.7% (252/551)	41.6%, 49.9%	48.7% (37/76)	37.4%, 59.9%
Male	38.0% (190/500)	33.7%, 42.3%	36.6% (158/432)	32.0%, 41.1%	47.1% (32/68)	35.2%, 58.9%
Claudication	20.3% (122/600)	17.1%, 23.6%	19.7% (104/528)	16.3%, 23.1%	25.0% (18/72)	15.0%, 35.0%
Discolored/blue legs	21.6% (133/617)	18.3%, 24.8%	20.6% (112/543)	17.2%, 24.0%	28.4% (21/74)	18.1%, 38.7%
Non-healing wound	11.4% (71/622)	8.9%, 13.9%	11.0% (60/546)	8.4%, 13.6%	14.5% (11/76)	6.6%, 22.4%
At least 1 sign/symptom	42.1% (264/627)	38.2%, 46.0%	41.2% (227/551)	37.1%, 45.3%	48.7% (37/76)	37.4%, 59.9%
High cholesterol	61.5% (375/610)	57.6%, 65.3%	61.5% (330/537)	57.3%, 65.6%	61.6% (45/73)	50.5%, 72.8%
Hypertension	72.5% (444/612)	69.0%, 76.1%	73.0% (394/540)	69.2%, 76.7%	69.4% (50/72)	58.8%, 80.1%
Diabetes	47.3% (291/615)	43.4%, 51.3%	46.5% (251/540)	42.3%, 50.7%	53.3% (40/75)	42.0%, 64.6%
Smoking history	40.1% (250/623)	36.3%, 44.0%	38.7% (212/548)	34.6%, 42.8%	50.7% (38/75)	39.4%, 62.0%
Stroke/TIA	13.2% (82/620)	10.6%, 15.9%	11.5% (63/547)	8.8%, 14.2%	26.0% (19/73)	16.0%, 36.1%
CAD	33.3% (206/618)	29.6%, 37.0%	31.6% (172/544)	27.7%, 35.5%	45.9% (34/74)	34.6%, 57.3%
Number of risk factors						
0	7.8% (49/626)	5.7%, 9.9%	8.2% (45/550)	5.9%, 10.5%	5.3% (4/76)	0.2%, 10.3%
1	13.9% (87/626)	11.2%, 16.6%	13.8% (76/550)	10.9%, 16.7%	14.5% (11/76)	6.6%, 22.4%
2	23.3% (146/626)	20.0%, 26.6%	24.5% (135/550)	20.9%, 28.1%	14.5% (11/76)	6.6%, 22.4%
3+	55.0% (344/626)	51.1%, 58.8%	53.5% (294/550)	49.3%, 57.6%	65.8% (50/76)	55.1%, 76.5%

[3] Diage et al. BMC Research Notes 2013, 6:404. http://www.biomedcentral.com/1756-0500/6/404

FINANCIAL MODEL

Semler Scientific, Inc

	2014 A	Q1A	Q2A	Q3A	Q4E	2015 E	2016 E	2017 E	2018 E
Total Revenues	$3,635.0	$1,202.0	$1,303.0	$1,562.0	$1,745.0	$5,812.0	$7,910.1	$10,401.8	$13,522.4
YOY Growth	*59.9%*	*43.6%*	*54.0%*	*74.1%*	*65.4%*	*38.2%*	*36.1%*	*31.5%*	*30.0%*
Cost of Revenues	$693.0	$220.0	$244.0	$385.0	$450.5	$1,299.5	$1,826.2	$2,328.1	$2,919.0
Gross Income	$2,942.0	$982.0	$1,059.0	$1,177.0	$1,294.5	$4,512.5	$6,084.0	$8,073.7	$10,603.4
Gross Margin	*80.9%*	*81.7%*	*81.3%*	*75.4%*	*74.2%*	*77.6%*	*76.9%*	*77.6%*	*78.4%*
R&D	$1,114.0	$309.0	$406.0	$268.0	$331.0	$1,314.0	$1,194.0	$1,116.0	$1,087.0
% R&D	*30.6%*	*25.7%*	*31.2%*	*17.2%*	*19.0%*	*22.6%*	*15.1%*	*10.7%*	*10.0%*
Selling & Mktg	$3,723.0	$1,228.0	$1,304.0	$1,314.0	$1,435.0	$5,281.0	$5,315.0	$5,468.0	$6,382.6
% Sell&Mktg	*102.4%*	*102.2%*	*100.1%*	*84.1%*	*82.2%*	*90.9%*	*67.2%*	*52.6%*	*47.2%*
G&A	$2,447.0	$793.0	$662.0	$1,147.0	$717.0	$3,319.0	$3,489.0	$3,591.0	$3,705.1
% G&A	*67.3%*	*66.0%*	*50.8%*	*73.4%*	*41.1%*	*57.1%*	*44.1%*	*34.5%*	*27.4%*
Operating Income	($4,342.0)	($1,348.0)	($1,313.0)	($1,552.0)	($1,188.5)	($5,401.5)	($3,914.0)	($2,101.3)	($571.3)
Operating Margin	*-119.4%*	*-112.1%*	*-100.8%*	*-99.4%*	*-68.1%*	*-92.9%*	*-49.5%*	*-20.2%*	*-4.2%*
Interest expense (income)	$174.0	$24.0	$28.0	$28.0	$18.0	$98.0	$25.0	$25.0	$25.0
Other Expense total	$173.0	$24.0	$28.0	$28.0	$18.0	$98.0	$25.0	$25.0	$25.0
Pre-Tax Income	($4,515.0)	($1,372.0)	($1,341.0)	($1,580.0)	($1,206.5)	($5,499.5)	($3,939.0)	($2,126.3)	($596.3)
Taxes	$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%*
Net Income	($4,515.0)	($1,372.0)	($1,341.0)	($1,580.0)	($1,206.5)	($5,499.5)	($3,939.0)	($2,126.3)	($596.3)
YOY Growth	*-102.2%*	*-67.9%*	*-29.9%*	*-7.8%*	*-0.5%*	*-21.8%*	*28.4%*	*46.0%*	*72.0%*
Net Margin	*-124.2%*	*-114.1%*	*-102.9%*	*-101.2%*	*-69.1%*	*-94.6%*	*-49.8%*	*-20.4%*	*-4.4%*
EPS	($1.10)	($0.29)	($0.27)	($0.32)	($0.24)	($1.12)	($0.57)	($0.29)	($0.08)
YOY Growth	*61.1%*	*21.0%*	*-22.9%*	*-1.8%*	*5.3%*	*-1.1%*	*48.8%*	*50.0%*	
Diluted Shares O/S	4,092	4,764	4,979	4,983	4,999	4,931	6,900	7,450	7,550

Brian Marckx, CFA

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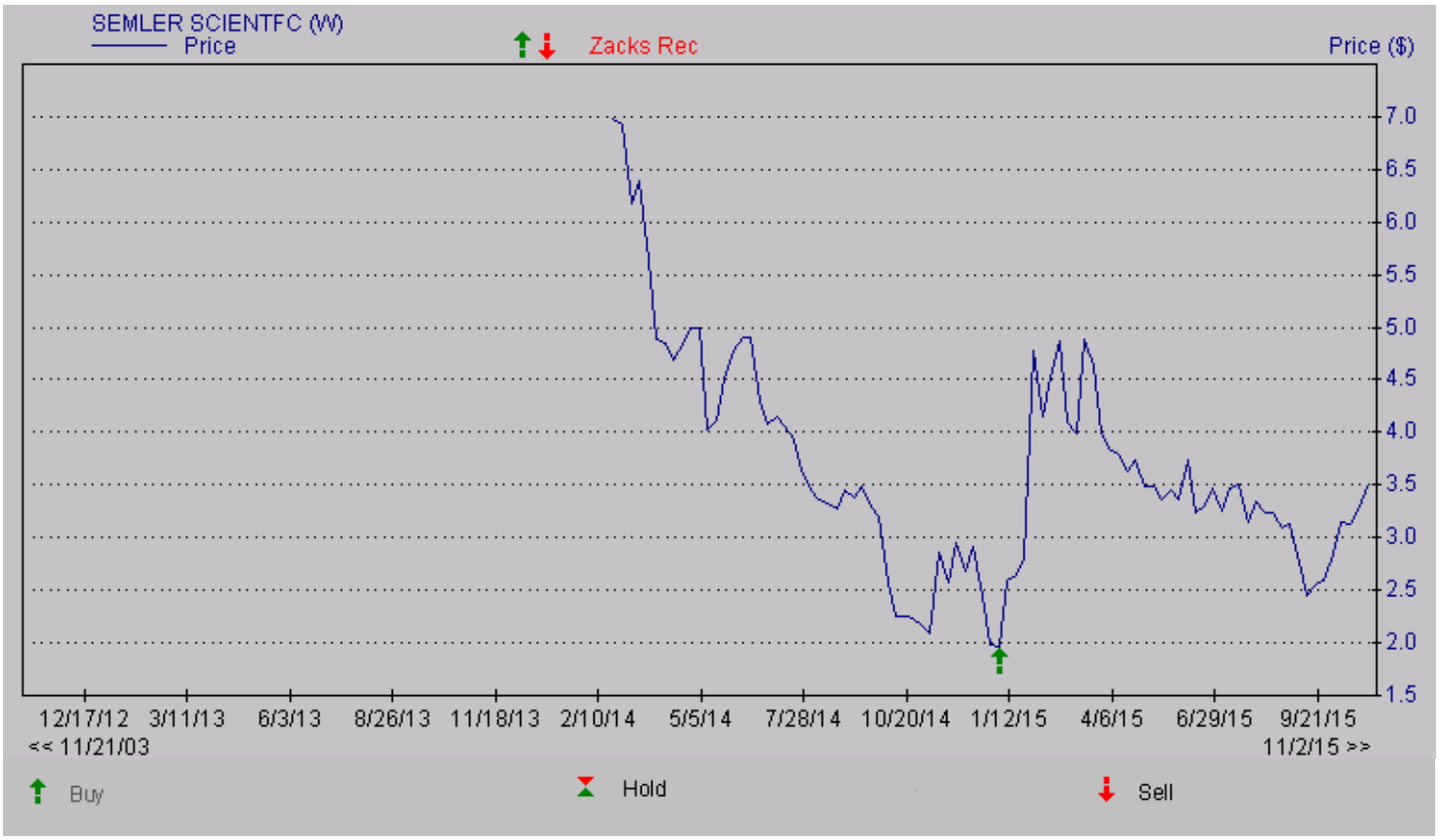

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