

2. DXCM's market opportunity in Type I diabetes is smaller than the "street" thinks. Growth in new users should disappoint, and should not be enough to overcome declining sensors per patient.
3. Reimbursement for Type II diabetics is thought to be at least several years away. Clinicians openly question the value of such reimbursement, and it may be delayed indefinitely.
4. DXCM has enjoyed a growth tailwind over the past 18 months because private payers introduced coverage the first time. This benefit should disappear, as private coverage is now widespread.

Summary: DexCom (DXCM) is a medical device company based in San Diego, CA. It manufactures and sells a continuous glucose monitor (CGM) called the DexCom SEVEN PLUS, which is used to manage diabetes. A CGM remains embedded in the skin, and measures the glucose level in a patient's interstitial fluid (i.e. the fluid between cells), allowing the patient to see how glucose levels are changing at 5-minute intervals. Whereas the traditional finger-stick method of checking blood glucose provides a snapshot, the CGM shows a "movie" of how glucose levels are changing, which can allow for the better management of diabetes (central to which is the avoidance of too high [hyperglycemic] or too low [hypoglycemic] blood glucose levels). A CGM may be used as a complement to, but not a replacement for, the finger-stick method of checking blood glucose. DXCM and Medtronic are currently the only two competitors in the CGM market, of which we estimate Medtronic holds ~80% share.

DXCM has grown well from a low base. The company sold 14,850 new kits in 2010, up from 8,145 in 2009, and 4,227 in 2008. These sales have come almost entirely from Type I diabetics in the US (which DXCM numbers at 1.3MM), the only group for which CGM is reimbursed by private insurance. DXCM's sales are driven largely by the disposable sensors, which are inserted into the skin. Sensors comprised 75% (\$9.9MM) of total product revenues in 1Q11. International sales are not meaningful. The "street" believes that DXCM will continue to grow Type I penetration at a rapid pace, more than quadrupling its user base (net of drop outs) to ~110,000 by end-2013. Over the longer-term, bulls anticipate that the introduction of private payer reimbursement for Type II diabetics (numbering ~23MM in the US) will provide an enormous growth opportunity for DXCM. As a result, DXCM trades at a high multiple, and a sizable premium to its peer group (8.5x consensus 2012 sales, compared to peer average 5.3x.)

DXCM has never disclosed metrics on patient dropouts or sensors used per patient. Despite this, "street" models plug in a (rather arbitrary) estimate of the dropout rate (ranging from 4%-14% per annum) when making projections. Based on our discussions with endocrinologists, diabetes educators, and other industry contacts, we think DXCM's attrition rate is much higher than this, and that patients drop out more rapidly than "street" models imply. Our research indicates that, due to the high mental and physical burden of using the device, patient compliance

tends to fall after an initial period of religious usage, after which patients use the device much less often or drop it entirely. As such, we think the “street’s” assumption that attrition will fall (from 15% of net users in 2010 to 13% in 2012) will prove incorrect. As DXCM moves beyond the early growth stage, and its user base ages, we look for bulls’ attrition estimates to be revised higher.

The “street” assumes that sensors used per active patient will increase over time. This assumption, on its face, must be wrong, because new users are the most active users and, as time goes on, they will be a lower percentage of the total, so sensors per user should decline. It seems clear that because compliance falls after an initial period of higher usage, new users use more sensors than old users. Therefore, sensors per active user must decline. As DXCM increasingly expands beyond the (more enthusiastic) early adopter population, this drop in compliance should grow more pronounced. We model sensors per user flat to down.

Our research indicates DXCM’s market opportunity in Type I is smaller than the “street” thinks. To project new patient additions, the “street” looks at the entire Type I population of 1.3MM and assumes that DXCM will achieve a certain increasing penetration of this market. We think this approach misses some critical distinctions. Based on our discussions with industry contacts, we think DXCM’s market is limited to the 170,000 patients using a non-Medtronic insulin pump (as substantially all Medtronic pump users go with its combined pump/CGM product), and the ~500,000 patients who do multiple daily injections (MDI) of insulin, which are significantly more difficult to convert. Clinicians have estimated that only 30%-40% of pumpers and 5% of MDI may be candidates for CGM. We discuss the barriers to adoption further below. Given this smaller addressable market, we think growth in new users will disappoint bulls’ expectations.

The “street” anticipates that, over the longer term, the introduction of private payer coverage for Type II diabetics (numbering ~23MM in the US) represents a major growth opportunity for DXCM. This is thought to be at least several years away. However, clinicians (including some key thought leaders) indicate that they see little value in reimbursing CGMs for Type II diabetics, due to anticipated compliance issues and, most importantly, because Type IIs rarely suffer from severe hypoglycemia (the prevention of which is the main reason for using a CGM). It was also noted that, unlike Type I diabetics, Type IIs don’t have a powerful lobbying group pushing for reimbursement. Given this, we think Type II reimbursement will be delayed beyond bulls’ expectations, perhaps indefinitely.

DXCM has enjoyed a growth tailwind over the past 18 months, as private payers introduced coverage. Our discussions with industry contacts suggest that coverage is now widespread and this one-time tailwind should begin to fade. We expect year-over-year comparisons to become more difficult in 2011. As time goes

on, DXCM may even face a slight headwind as an increasing proportion of US workers fall under high-deductible health plans. Indeed, management noted on the 1Q11 call that they were beginning to see a negative effect on patients' spending due to rising annual deductibles.

Because DXCM has not attained profitability, the "street" values the company using a multiple of sales. The stock currently trades at 8.5x the "street's" 2012 sales estimate of \$124MM, compared to peers at 5.3x. Our target price of \$10 represents a 6.4x multiple of our 2012 revenue estimate of \$106MM. We think DXCM will trade at a multiple closer to peers as the limitations to its growth become apparent.

With regard to specific catalysts, we expect that consumable revenues will fall short of bulls' expectations, leading them to raise their attrition rate assumptions. We also think new patient adds will disappoint, leading the "street" to recognize that the growth opportunity in Type I is smaller than assumed. Though our thesis does not depend on it, any further delay in the FDA approval process for DXCM's combined products with Animas and Insulet (which we discuss below) would likely send the stock lower, as well.

DXCM completed a secondary offering of 5.4MM shares (including over-allotment option) on May 5th, raising \$82MM. We note that, according to the prospectus, DXCM management is prevented from selling any stock (without the underwriters' approval) until 90 days following the offering. Depending on DXCM's earnings release date, we estimate this lockup will end on August 21st.

Borrow information:

Supply Quantity	Quantity On Loan	Available to Borrow	Date
21.4 mm	3.4mm	18.5 mm	7.14.11

Source: Data Explorers

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Background:

DexCom (DXCM), based in San Diego, CA, was founded in 1999 and is managed by former executives of MiniMed (acquired by Medtronic in 2001). It is a medical device company whose sole product is a continuous glucose monitor (CGM). A CGM consists of three parts: 1) a sensor, or needle, which remains embedded in the patient's skin, typically in the abdomen; 2) a wireless transmitter, which sits atop the sensor and relays data to the receiver; and 3) the receiver, which is a cell phone-sized device that displays the data. (A video of the insertion

process can be found at http://www.youtube.com/watch?v=KDTcD_uHcyo). Unlike traditional glucose meters, which measure blood glucose by drawing a blood sample from the patient's finger, the CGM measures glucose levels in the interstitial fluid (i.e. the fluid between cells) in the patient's subcutaneous (i.e. fat) layer. Accuracy is lower than using a finger-prick meter, and there is a 15-25 minute delay between when glucose shows up in the blood and in the interstitial fluid. As a result, the CGM may be used as a complement to, but not a replacement for, a traditional finger-prick glucose meter.

DexCom's current generation CGM, the Dexcom SEVEN PLUS, costs \$800 for a starter kit (which includes the transmitter and receiver). Disposable sensors are indicated for 7-day use, though we estimate patients extend their use to 10-12 days, on average, both to save on co-payments and to reduce the frequency of uncomfortable insertions. Each sensor costs \$60. Most private insurance plans in the US now cover at least 80% of the cost of a CGM and sensors. There is currently no reimbursement in Europe and DXCM's ex-US sales are not meaningful to results. An endocrinologist typically writes a prescription for a CGM, and provides supporting documentation attesting that the patient needs it. 70% of DXCM's sales are fulfilled by the company itself, while the other 30% goes through a handful of distributors (the largest of which is EdgePark Medical, representing 20% of sales). Disposable sensors represented 75% of DXCM's 1Q11 product revenues, with new kit sales making up the remaining 25%.

The CGM market is split between Medtronic (~80% share by revenue) and DXCM (~20% share). At present, Medtronic offers the only CGM that integrates with an insulin pump. DXCM is currently seeking FDA approval for two combined CGM/pump products that integrate with Animas (part of J&J) and Insulet pumps. Approval is expected in mid-2012 and late-2012/early-2013, respectively, although further delays are quite possible. Animas and Insulet together hold ~20% share of the pump market (compared to Medtronic's 70%).

The CDC estimates there are 25.8MM diabetics in the US, of whom 7MM are undiagnosed. Of this number, DXCM estimates 1.3MM are Type I diabetics. Type I diabetes is an autoimmune disease which destroys insulin-producing beta cells in the pancreas. It is typically diagnosed in childhood. The body needs insulin to convert blood glucose to usable energy, so unless treated with artificial insulin, Type I diabetes is usually fatal. Insulin is administered via an insulin pump (~570k patients, according to Medtronic), via multiple daily injections with an insulin pen (MDI, ~500k patients, based on DXCM's estimates), or through conventional insulin therapy, which involves fewer injections and no self-monitoring of blood glucose (SMBG).

Type II diabetes, sometimes called “adult onset” diabetes, is caused by lifestyle and/or genetic factors. Either the body develops a resistance to insulin, or the beta cells in the pancreas “burn out” and can’t produce sufficient quantities of insulin to break down elevated blood glucose levels. The first line of treatment is exercise and weight loss, to reduce glucose levels naturally. Most Type IIs are also placed on oral medications to either reduce glucose levels, or to boost insulin production. In most cases, the pancreas is still producing some insulin, just not enough. Insulin therapy is sometimes used for more severe cases, to supplement the pancreas’ natural production.

The management of diabetes centers on keeping blood sugar levels within a safe range, avoiding periods of too high (hyperglycemic) or too low (hypoglycemic) glucose levels. Over time, the former can lead to neuropathy or blindness. As for the latter, a single severe hypoglycemic episode can result in coma or even death, if not treated. Type IIs are more subject to hyperglycemia, and rarely have severe glucose lows. By contrast, Type Is tend to be more concerned with avoiding a hypoglycemic low. The purpose of CGM is to provide an ongoing view of how glucose levels are trending, to aid the patient in timing and sizing insulin delivery. The CGM has programmable alarms that will alert the patient when glucose levels rise above or below a pre-set range.

DXCM is also in a partnership with Edwards Lifesciences to develop a CGM for in-hospital use. This is not expected to receive FDA approval until the first half of 2013 at the earliest, and should not contribute meaningful revenue for several years.

Discussion:

1. “Street” analysts expect the number of sensors used per patient to rise over time, while we expect sensors per patient will remain flat or will fall.

Based on our discussions with endocrinologists, diabetes educators, product distributors, and other industry contacts, it appears that patient compliance falls after an initial period of religious usage, with patients wearing the device much less often or dropping it entirely. This is partly due to frustration over the technical limitations of the device. Diabetes educators say it is very difficult to get patients to understand that the CGM is not measuring glucose in the blood, but in the interstitial fluid. Because of this, the CGM is far less accurate than a finger-prick meter, which measures blood glucose. There is also a 15-25 minute delay before glucose in the blood shows up in the interstitial fluid, further compounding error. Many patients believe the CGM will allow them to stop or significantly reduce their finger-prick readings, and they grow disenchanted when this turns out to be false. The purpose of the CGM is to act as a rough guide to how glucose levels are

trending, not as a precise measurement device upon which to base the patient's insulin dosing. Once the patient comes to realize this, the CGM's value in the user's mind is diminished.

Clinicians report that the physical and (especially) mental burden of wearing and using the device is problematic. As one clinician told us, "The number one thing diabetics want is a cure; the number two thing they want is to forget they have diabetes." In that regard, the problem with CGM is that it requires constant attention and management. The primary function of the CGM is to sound an alarm when glucose levels fall toward the hypoglycemic range. However, the inaccuracy of the device results in numerous false alarms, particularly annoying when the patient is asleep. As one contact put it, "[when you buy a CGM] it's like you just paid someone to nag you, constantly." Numerous clinicians reported that patients eventually suffer from data overload, and that most patients aren't equipped to interpret the glucose trend data without the help of a physician, leaving them frustrated. With regard to the physical burden, multiple contacts said that patients stopped wearing the CGM because they reportedly "felt like the bionic man." One clinician at a large diabetes center in California estimated that 50% of her DXCM patients eventually stopped using it, or reduced their usage significantly. The CGM "is a lot of trouble . . . it doesn't make life easier," she told us. In our discussions, estimates of the dropout rate among pediatric patients ranged from 50%-80%.

Our research indicates that, if a patient is going to be non compliant, this generally happens after an initial "honeymoon" period using the CGM. Numerous clinicians suggested that patients make a concerted effort to use the device religiously, at first. One distributor told us, "Most of our customers are wearing 24/7 for the first 6-8 months . . . and then lose that religion until some life-changing event happens." Thus, as DXCM moves beyond the early-growth stage, and as its user base ages, sensors-per-patient should decline more rapidly. As DXCM expands beyond the (more enthusiastic) early adopter population, this drop in compliance should be more pronounced.

Though DXCM provides quarterly data on new patient adds, it has never disclosed metrics on patient dropouts or sensors used per patient. Despite this, "street" models plug in a (rather arbitrary) estimate of the dropout rate (ranging from 4%-14% per annum) to derive a net user number. In 1Q11, the "street" estimated that DXCM had 28,815 net (i.e. active) users, and that each active user on average used 5.7 sensors in the quarter (equivalent to one sensor every 16 days). In projecting disposables revenue for 2011 and 2012, the "street" models a slight decline in the annualized dropout rate (from 15% in 2010, to 14% in 2011, and 13% in 2012), and a rise in sensors used per active patient (from 5.8 in 2010, to 6.1 in 2011, and to 6.2 in 2012). The drop out rate is applied to the previous period's ending net user number. In other words, "street" assumptions imply that, from this

point on, more patients will continue using the device, and will use it more often. As discussed above, our research indicates this is unlikely to happen.

Table 1: "Street" projection of DXCM sensor revenues

	2010	2011E	2012E	2013E
New kits	14,962	21,700	30,582	38,228
Drop-outs	2,471	4,430	6,662	10,591
Avg. attrition % ¹	15%	14%	13%	13%
Net users, EoP	25,730	43,099	69,677	109,713
New kits as % of EoP users	58%	50%	44%	35%
Avg. sensors/user	5.8	6.1	6.2	6.5
Total sensors sold	474,300	871,800	1,442,721	2,362,410
Sensor rev. (\$M)	\$28.5	\$52.3	\$88.0	\$144.1

¹ Defined as the average dropout rate over the 4 quarters of the year. Each quarterly drop out rate is applied to the previous period's ending net user number.

(Source: "Street" estimates, OWS calculations)

That the “street’s” model is deeply flawed can be seen by considering a few of its implications. The most important is that, as time goes on, the new users become a smaller percentage of the total net users. New users can use up to a maximum of 12 sensors per quarter. For example, according to the “street” model, by the end of 2012, new users, e.g. those acquired during 2012 will be 44% of the total users, as opposed to the end of 2011 when new users were 50%. New users use more sensors than older users, as compliance decreases over time. Therefore, sensors per active user must decline, contrary to the “street” model.

Another implication of the “street” model is that, given a drop out rate of 15% of the net remaining users, which is the assumption, any given year’s “class,” that is the group that were new users in that year, will be 50% gone by the end of year 4, and 80% gone by the end of year 10. The model has the merit of admitting that users stop using the product. The problem is that it does not acknowledge the rapidity with which users stop using it. This is not very surprising, since the product has only been on the market for a couple of years with reimbursement available, so the “street” does not have much experience from which to draw. However, the model severely underestimates attrition compared to what we have heard from our sources over the course of our research.

Our model takes a different approach. We model sensors-per-patient on a gross basis (i.e. including all users who have purchased the device, regardless of whether they have stopped using it). As compliance reportedly drops after a 6-8 month period, our model splits DXCM’s gross user base into two groups, based on duration of usage. “New” users are patients added within the past 3 quarters; “Old” users are patients that have been using DXCM for >3 quarters. In 1Q11, we

estimate DXCM had 37,149 gross users, and that average sensors used per patient was 4.7 in the quarter (equivalent to one sensor every 19 days). We estimate “new” patients used 8.0 sensors, and “old” patients used 2.8 sensors, on average. Per our research discussed above, this gap reflects the fact that the “old” user group will have a much higher number of dropouts and casual users.

As DXCM moves beyond the early growth stage, and the “old” user group increases as a proportion of the whole, we expect average sensors used per gross patient to fall. We project that, within the “old” group itself, average sensors per gross patient will increase from 2.6 per quarter in 2010 to 3.1 in 2011, as the tailwind from improved reimbursement is exhausted, and remain flat at 3.1 in 2012. (We note that, as the “old” group ages further, this may exert downward pressure on sensors used per “old” patient, though we don’t model this.) Despite assuming improved utilization within the “old” group, we project the change in mix between “new” and “old” will lead to a decline in total sensors per gross patient next year. Our full year estimates are 4.9 average sensors per gross patient in 2011 (essentially flat from 4.8 in 2010), declining slightly to 4.6 in 2012. We project sensor revenues to total \$50.3MM in 2011 and \$74.9MM in 2012, versus the “street” at \$52.3MM and \$88.0MM, respectively. Our annual projections are shown below.

Table 2: OWS projection of DXCM sensor revenues

	2010	2011E	2012E	2013E
New kits	14,962	21,246	27,759	34,686
Gross users, EoP	33,099	54,345	82,104	116,791
New	12,362	17,196	22,413	27,844
Old	20,737	37,149	59,691	88,947
Sensors/user	4.8	4.9	4.6	4.4
New	8.6	8.5	8.5	8.5
Old	2.6	3.0	3.1	3.6
Sensors sold	474,300	833,280	1,227,287	1,821,032
Sensor rev. (\$MM)	\$28.5	\$50.3	\$74.9	\$111.1

(Source: Company filings, OWS estimates)

2. Our research indicates DXCM’s market opportunity in Type I is smaller than the “street” thinks. As DXCM approaches the limits of its addressable market, we expect growth in new patient adds to disappoint bulls’ expectations.

To project new patient additions, the “street” looks at the entire Type I population of 1.3MM and assumes that DXCM will achieve a certain increasing penetration of this market. We think this approach ignores some critical distinctions. First, clinicians have told us that a vast majority (>95%) of patients on

CGM are also on an insulin pump. This is both because there is a high mental hurdle for non-pump users to adopt the CGM (they do not want, or are not used to having, a device inserted in their body at all times), and because the population on insulin pumps tends to correlate with the population of more tech-savvy, active managers of the disease.

We estimate there are 570,000 insulin pump users in the US, and that Medtronic holds 70% share with 400,000 users. From industry contacts we have learned that, because Medtronic currently offers the only pump that combines a CGM (eliminating the need to carry two separate cell phone-sized devices), nearly all Medtronic pump users go with the integrated Medtronic CGM, rather than a separate product from DXCM. This effectively limits DXCM's opportunity among pump users to those not using a Medtronic pump (170,000 users). How many of these potential customers can DXCM convert? We estimate that Medtronic has approximately 150k-175k gross CGM users (before drop-outs), which represents 38%-43% of its pump customers. This corresponds roughly with clinicians' view (as expressed to us) that 30%-40% of all patients using an insulin pump would have interest in trying a CGM. We note that Medtronic has offered a combined CGM/pump device for several years now (and we are told that availability of the combined device is a key factor in getting new patients to try CGM, due to the significantly greater convenience level).

With this in mind, we project that DXCM will grow its gross user base from 13% of non-Medtronic pump users at present (~22,000), to 19% by end-2011 (37,000), to 29% by end-2012 (64,000), and to 39% by end-2013 (98,000). Our projections assume 7% growth in the overall pump market (based on DXCM estimates), with Medtronic taking only 33% share of new pump users (also per DXCM's estimate). If Medtronic performs better than our assumptions, DXCM's numbers will likely be lower. Given that DXCM is not expected to offer a combined CGM/pump product until mid-2012 at the earliest (and this may be delayed), and given Medtronic's much larger sales force, we think DXCM is unlikely to improve upon Medtronic's record of market penetration over the shorter term. Remember, too, that MDT hopes to introduce a new version of its pump/CGM combination that doubles the length of time the sensor can be used, in the same time period as the DXCM combination should be introduced.

The other market for DXCM is patients who do multiple daily injections (MDI) of insulin. We estimate MDIs number approximately 500,000, but the hurdle to converting them is much higher than for pump users. MDIs often forego the insulin pump to avoid the physical burden (i.e. they don't want to wear something inserted into their body) or mental burden (i.e. insulin pumps require a higher level of management) of the device. They typically avoid CGMs for the same reason. The MDI population, on average, also tends to be less tech-savvy

than pump users. Clinicians tell us that the majority of MDIs that do take up a CGM tend to convert to using a pump first, only adding the CGM later, or in conjunction with the pump. Most of these, we are told, end up choosing Medtronic because they've already used up their deductible in purchasing the pump, and so the integrated CGM is "free." Of the rest, they estimate only ~5% of MDIs would try using a CGM without a pump. We estimate DXCM currently has <15,000 gross MDI users (<3.0% of the MDI population). We assume this grows to 3.6% by end-2011 (17,000), 4.1% by end-2012 (18,000), and 4.8% by end-2013 (>19,000). These numbers assume that DXCM takes 100% share of the MDI market, which is likely optimistic.

Both DXCM and Medtronic are expected to release a new version of their respective sensors in 2Q12 (pending FDA approval). As it has been described to us by industry contacts, the DXCM Gen4 sensor provides a marginal improvement in size and accuracy over the current sensor. Indicated usage will remain at 7 days. Medtronic's new "Enlite" sensor is viewed as representing a more substantial improvement over the previous generation sensor (which our research indicates is generally viewed as less precise and more painful than DXCM's). Most important, the new Medtronic sensor is indicated for 6-day use (up from 3 days at present). We view this as eliminating a significant competitive disadvantage for Medtronic, though we do not reflect this in our model.

In sum, our projections for new patient adds imply that DXCM achieves 5.0% gross penetration (i.e. before drop outs) of the combined pump and MDI populations by end-2011 (54,000 gross users). We estimate this will rise to 7.5% by end-2012 (82,000), and to 10.6% by end-2013 (117,000). This is in keeping with clinicians' rough estimates that CGM is appropriate for 5%-10% of their patients. Given our underlying assumptions (declining Medtronic pump share, strong DXCM execution despite delays in combined product and small sales presence), these numbers may prove overly bullish. By comparison, the "Street" estimates that DXCM will reach 55,000 gross users by end-2011 (5.1% penetration), 85,000 by end-2012 (7.8%), and 124,000 by end-2013 (11.3%). Our projections for new kit revenues are \$17.0MM in 2011 and \$22.2MM in 2012, versus the "street" at \$17.6MM and \$25.8MM, respectively. We note that disappointing new kit sales would compound the revenue shortfall from fewer sensors used per patient.

3. Any further delay in the FDA approval process for DXCM's combined CGM/pump products with Animas (part of J&J) and Insulet would likely prove a major disappointment to bulls.

In 1H12, DXCM plans to submit both combined CGM/pump devices for FDA approval. The "street" expects them to receive final approval sometime in

2H12, with the Insulet device potentially falling into the beginning of 2013. The Animas product (called the “Vibe”) received CE Mark approval in June 2011, and is currently being launched in Europe (though DXCM does not expect to receive any meaningful revenues from this or any non-US markets in the immediate future). As part of its agreement with Animas, DXCM will receive a \$200 royalty for each “Vibe” sold in Europe (and later in the US), plus revenue from the sale of sensors.

As we discuss above, the availability of a combined device is viewed as a substantial positive for getting new patients to try CGM, as it eliminates the need to carry two separate cell-phone sized receivers (one for the pump and one for the CGM). However, based on our discussions with industry contacts, we think that approval for DXCM’s combined devices will have only a marginal effect on pump market share. We are told that a patient’s purchase decision is typically made based on which pump they want (which is viewed as a more important component), not necessarily on whether a CGM is combined with the pump. In any event, we (conservatively) model a decline in market share for Medtronic, and our financial projections assume that DXCM achieves a market penetration similar to Medtronic’s, despite lacking a combined product to offer over the next 12-18 months, and despite the introduction of MDT’s improved CGM.

We are told that the FDA approval process has grown increasingly stringent when it comes to insulin pumps, which are considered Class II devices. DXCM’s new products with Animas and Insulet both require a Pre-market approval (PMA) supplement filing. DXCM has already announced one delay in this process on its 3Q10 conference call. We view the FDA approval process as an asymmetric risk in our favor: we think it’s unlikely that approval will be secured prior to when management has set expectations, yet think it’s quite possible that the process could be delayed further. Any further delay would likely prove a major disappointment to bulls. We note that, upon announcing the first delay after 3Q10, the stock fell 22%.

4. Clinicians indicate that Type II reimbursement may be delayed beyond bulls’ expectations, perhaps indefinitely.

The “street” anticipates that, over the longer term, the introduction of private payer coverage for Type II diabetics (numbering ~23MM in the US) represents a major growth opportunity for DXCM. This is thought to be several years away. More recently, the company has drawn attention to a 100-patient clinical study presented at the June 2011 ADA meeting, which suggested improved outcomes for Type II patients using CGM. The “street” views this as a (small) first step toward securing reimbursement for Type IIs. We are not so sure.

First, clinicians tell us that glucose levels tend to exhibit less fluctuation in Type IIs, and that Type IIs are far less prone to severe hypoglycemia. Because the primary function of the CGM is to protect against such hypoglycemic attacks, clinicians tell us, the value of CGM to Type IIs is limited. The other major issue is lack of compliance. Clinicians have told us that the CGM is only effective (as measured by longer-term reduction in glucose levels) when the user is highly compliant in using the device. But compliance among Type IIs, even with insulin therapy, is widely acknowledged to be quite poor – as one nurse put it, with CGM and Type II, “you are going to have huge compliance issues.” Among other reasons, this is because Type II diabetes often correlates with poor lifestyle choices, and because Type II is typically “adult-onset”, which means patients haven’t been conditioned from childhood to the high level of management and attention required to manage the disease.

Opinion was nearly unanimous among clinicians with whom we spoke that CGM does not make sense for Type II patients. One head of a major diabetes center described the prospect as “a colossal waste of money.” We note that our contacts included several high-profile thought leaders in the diabetes field, so skepticism appears to prevail among those who are shaping the debate. When asked about the likelihood of Type II reimbursement, one contact noted that, unlike Type Is in the Juvenile Diabetes Research Foundation (JDRF), Type IIs lack a coherent voice or powerful lobbying group to push for insurance coverage. In light of this, we think progress toward Type II reimbursement will be much slower than bulls expect.

Numerous clinicians did suggest that, although a personal CGM would not make sense for Type IIs, it may be beneficial to reimburse for a CGM like Medtronic’s iPro system, which the doctor purchases and lends out to a new patient for 3-5 days for one-time educational purposes. This is a somewhat different device and business model than personal CGM. We note that DXCM does not offer a product like iPro and, we are told, does not plan to release one for the foreseeable future.

5. DXCM has enjoyed a growth tailwind over the past 18 months, as private payers introduced reimbursement. Coverage is now widespread and this one-time tailwind should begin to fade.

Industry contacts have told us that the introduction of private payer reimbursement over the past 18 months has been a major driver of new patient additions. (We note that, in the absence of insurance, a patient’s out-of-pocket expense for the sensors alone is roughly \$240 per month.) However, our contacts suggest that reimbursement is now widespread, with the majority of private payers covering >80% of the cost of both device and sensors. We expect year-over-year

comparisons to become more difficult over the course of 2011, as most of the private payers have already introduced coverage, and any benefit will lap completely by 2012.

As time goes on, DXCM may even face a slight headwind as an increasing proportion of US workers fall under high-deductible health plans. According to the Kaiser Family Foundation, 10% of US workers were covered under a high-deductible plan (>\$2k / year) as of 2010, up from 3% in 2007. Management noted on the 1Q11 call that it was beginning to see a negative effect from rising annual deductibles. The business is seasonally weak in January and February, as annual deductibles reset with the new year and patients delay their spending. This year, the company said weakness extended into March as patients took longer to work through their (higher) deductibles.

6. Emerging technologies, a return by Abbott to the CGM market, and/or improvement in substitute products could threaten DXCM's growth trajectory.

Although no new CGM technologies are set to become commercially available over the short term, there are dozens of products in development. Most notably, Echo Therapeutics (ticker: ETCE) is developing a non-invasive CGM that, while initially targeted at the in-hospital market, could receive FDA approval as early as 2013. PositiveID (ticker: PSID) is developing an implantable CGM for long-term use. If any of these new technologies should emerge as a viable contender, it would likely deflate the DXCM bulls.

More immediately, Abbott is working to resolve manufacturing and product issues that have kept its Freestyle Navigator CGM off the market for about two years. The company had to stop selling new CGMs due to a potential flaw in the plastic casing of the device. We have been told by a leading biomedical engineer in the CGM field that Abbott's product (which uses a different technology than DXCM/Medtronic called "wired enzyme") is "far and away" superior to DXCM's. As he put it, "the Abbott 1st generation sensor is better than the DexCom 3rd generation sensor." If Abbott should successfully address its product issues over the short term, it would surely harm DXCM's prospects.

We also note (based on our own tests) that finger-stick glucose meters have advanced to the point where usage is completely painless. Given the far higher accuracy and lower usage costs, we think the continued advancement of finger-stick glucometers may render the DXCM CGM increasingly less compelling by comparison.

7. Recent results

DXCM's 1Q11 product revenues of \$13.1MM were up +94% from \$6.8MM in 1Q10. Total revenues (i.e. including development grant revenue) were \$14.2MM, slightly below "street" consensus of \$14.6MM. Product gross margin of 36.4% was up substantially from 24.0% in 1Q10, as capacity utilization is building from a low base. EPS was (\$0.19) in the quarter, matching consensus estimates. The company reiterated its full-year 2011 guidance of \$67.5MM-\$72.5MM in product revenues.

On May 5th, DXCM sold an additional 4.7MM shares (5.4MM after the underwriters exercised their over-allotment option) at a price of \$15.19/share in a secondary offering, raising \$82MM cash. There was \$37MM in cash and equivalents on the balance sheet as of 3/31/11, prior to the secondary offering.

DXCM is expected to announce 2Q11 earnings in the first week of August.

8. Financial assumptions

a. Revenues

We forecast revenue growth of 54% Y/Y in 2011 and 41% Y/Y in 2012. This compares to "street" estimates of 61% Y/Y and 58% Y/Y in 2011 and 2012, respectively.

We project growth of 45% Y/Y and 31% Y/Y in new kit revenues for 2011 and 2012, compared to the "street" at 50% and 47%, respectively. Our model assumes that new kit sales trail "street" estimates as DXCM begins to come up against the limits of its addressable market, and the tailwind from initial private reimbursement is exhausted. We project sensor revenues will grow 77% Y/Y and 49% Y/Y in 2011 and 2012, respectively. As discussed previously, our model assumes a higher attrition rate than the "street" and a decline in sensors used per patient. The "street" projects sensor revenue growth of 84% Y/Y and 68% Y/Y in 2011 and 2012.

We project development grant revenue of \$7.7MM in 2011 and \$8.5MM in 2012, in line with the "street."

b. Other items

We project gross margin of 44.4% in 2011 and 54.5% in 2012, as capacity utilization continues to grow from a low base. These estimates are in line with the "street's" projections for 2011, but below the "street's" 2012 estimate of 62.3%, as we expect DXCM to enjoy less leverage off its fixed cost base. Our R&D forecast is based on management guidance of roughly \$7MM/quarter.

9. Valuation

As DXCM has not attained profitability, the “street” values the company using a multiple of sales. The stock currently trades at 8.5x the “street’s” 2012 sales estimate of \$124MM, compared to peers at 5.3x. Our target price of \$10 represents a 6.4x multiple of our 2012 revenue estimate of \$106MM. We think DXCM will trade at a multiple closer to peers as the limitations to its growth become apparent.

Table 3: Peer Group Valuation

(in \$MM)	Ticker	Mkt cap	EV	"Street" 2012 Rev	P/S	EV/S
ABIOMED	ABMD	631	570	137	4.6x	4.2x
Atricure	ATRC	220	212	77	2.9x	2.8x
Endologix	ELGX	535	501	104	5.1x	4.8x
HeartWare International	HTWR	986	862	159	6.2x	5.4x
MAKO Surgical	MAKO	1,249	1,186	126	9.9x	9.4x
NxStage Medical	NXTM	1,035	977	244	4.2x	4.0x
Volcano	VOLC	1,703	1,589	415	4.1x	3.8x
Average					5.3x	4.9x
DexCom*	DXCM	1,060	941	124	8.5x	7.6x

(Source: Bloomberg, 7/18/2011)

* Reflects May 5th secondary offering

With regard to specific catalysts, we expect that consumable revenues will fall short of bulls’ expectations, leading them to raise their attrition rate assumptions. We also think new patient adds will disappoint, leading the “street” to recognize that the growth opportunity in Type I is smaller than assumed. As discussed previously, any further delay in the FDA approval process for DXCM’s combined products with Animas and Insulet would likely send the stock lower, as well.

8. Risks

a. Potential acquisition candidate. We view Animas (J&J) as a possible acquirer, though we wonder if J&J would pay such a high premium for DXCM’s comparatively dated glucose monitoring technology.

b. Higher than expected penetration of new users. Because DXCM is still in the early growth stages, new patient adds could surprise to the upside.

9. Financial projections

a. Annual projections

(in \$MM)	2008	2009	2010	2011E	2012E
New kit revenue	2.8	5.9	11.8	17.0	22.2
Sensors revenue	5.3	12.3	28.5	50.3	74.9
Dev. grant revenue	1.6	11.7	8.5	7.7	8.5
Total revenue	9.7	29.9	48.7	75.0	105.6
COGS	15.4	26.0	30.2	41.7	48.1
Gross profit	-5.7	3.8	18.5	33.3	57.5
R&D	19.6	14.3	23.2	27.4	28.0
SG&A	27.7	35.2	40.5	44.4	48.5
Operating income	-53.0	-45.6	-45.2	-38.5	-19.0
Interest & other exp	5.2	7.8	10.0	0.0	0.0
Pre-tax income	-58.2	-53.4	-55.2	-38.5	-19.0
Tax expense	--	--	--	--	--
Net income	-58.2	-53.4	-55.2	-38.5	-19.0
EPS (dil.)	(\$1.97)	(\$1.21)	(\$0.97)	(\$0.59)	(\$0.28)
Avg. shares (dil.)	29.5	44.3	56.9	65.4	68.3
% of sales					
Gross profit	-58.5%	12.9%	38.0%	44.4%	54.5%
R&D	202.5%	47.8%	47.7%	36.5%	26.5%
SG&A	285.4%	117.8%	83.2%	59.2%	45.9%
Operating income	-546.5%	-152.8%	-93.0%	-51.3%	-18.0%
Net income	-600.3%	-178.9%	-113.5%	-51.3%	-18.0%
Y/Y % change					
	2008	2009	2010	2011E	2012E
New kit revenue	42.6%	112.9%	99.2%	44.5%	30.7%
Sensors revenue	66.7%	132.5%	131.0%	76.7%	48.9%
Development grant revenue	na	619.5%	-27.5%	-8.5%	9.9%
Total revenue	110.2%	208.3%	62.9%	54.1%	40.7%
COGS	20.7%	69.4%	16.0%	38.2%	15.2%
Gross profit	na	na	380.2%	80.1%	72.7%
R&D	21.7%	-27.2%	62.5%	17.8%	2.3%
SG&A	23.3%	27.2%	15.1%	9.7%	9.2%
Operating income	na	na	na	na	na
Interest & other expense	na	49.5%	27.8%	-100.3%	0.0%
Pre-tax income	na	na	na	na	na
Net income	na	na	na	na	na
EPS (dil.)	na	na	na	na	na
Avg. shares (dil.)	4.1%	50.3%	28.3%	15.0%	4.4%

b. Quarterly projections

(in \$MM)	4Q10	1Q11	2Q11E	3Q11E	4Q11E	1Q12E
New kit revenue	3.9	3.2	4.3	4.4	5.1	4.3
Sensors revenue	9.7	9.9	11.7	13.2	15.5	15.6
Dev. grant revenue	2.0	1.0	4.9	0.9	0.9	1.0
Total revenue	15.6	14.2	20.9	18.5	21.5	20.8
COGS	8.6	9.1	10.6	10.6	11.5	11.1
Gross profit	7.0	5.1	10.3	7.9	10.0	9.7
R&D	6.9	6.3	7.1	7.0	7.0	6.9
SG&A	10.0	10.7	10.9	11.3	11.5	11.7
Operating income	-9.9	-11.9	-7.7	-10.4	-8.5	-8.9
Interest & other expense	0.0	0.0	0.0	0.0	0.0	0.0
Pre-tax income	-9.9	-11.9	-7.7	-10.4	-8.5	-8.9
Tax expense	--	--	--	--	--	--
Net income	-9.9	-11.9	-7.7	-10.4	-8.5	-8.9
EPS (dil.)	(\$0.16)	(\$0.19)	(\$0.12)	(\$0.15)	(\$0.12)	(\$0.13)
Avg. shares (dil.)	60.4	62.2	63.4	67.9	68.0	68.1
% of sales						
Gross profit	44.7%	36.1%	49.3%	42.5%	46.7%	46.6%
R&D	44.1%	44.2%	34.0%	37.9%	32.5%	33.1%
SG&A	63.8%	75.6%	52.2%	61.2%	53.5%	56.2%
Operating income	-63.2%	-83.7%	-37.0%	-56.6%	-39.3%	-42.6%
Net income	-63.2%	-83.7%	-37.0%	-56.6%	-39.3%	-42.6%
Y/Y % change						
	4Q10	1Q11	2Q11E	3Q11E	4Q11E	1Q12E
New kit revenue	84.3%	64.0%	55.8%	38.0%	32.0%	32.0%
Sensors revenue	109.8%	105.6%	85.3%	73.3%	59.5%	57.2%
Dev. grant revenue	-46.8%	-62.8%	78.6%	1.4%	-56.0%	-3.4%
Total revenue	49.3%	48.5%	77.2%	58.3%	37.5%	47.0%
COGS	35.9%	48.8%	45.8%	29.5%	32.6%	22.7%
Gross profit	70.2%	47.9%	127.6%	126.0%	43.7%	90.0%
R&D	65.4%	32.3%	30.9%	13.6%	1.4%	10.1%
SG&A	6.1%	9.4%	5.2%	8.9%	15.3%	9.2%
Operating income	na	na	na	na	na	na
Interest & other expense	na	na	na	na	na	na
Pre-tax income	na	na	na	na	na	na
Net income	na	na	na	na	na	na
EPS (dil.)	na	na	na	na	na	na
Avg. shares (dil.)	31.3%	21.2%	10.2%	16.7%	12.6%	9.5%

c. Financial metrics (in MM)

Shares outstanding (dil.)*	67.8
Market value	\$1,060
Cash*	\$119
Debt	--
Enterprise value	\$941
DSO	46
DSI	64

* Reflects May 5 secondary offering of 5.4MM shares (including over-allotment option) for \$82MM proceeds.