
Roche 4Q16 - Global Diabetes Care Revenue falls 11%, staggering 40% YOY North American decline; Pooled "Big 3" revenue falls 5% YOY; Accu-Chek Insight CGM launches in EU - February 1, 2017

Executive Highlights

- Global Diabetes Care revenue totaled 532 million CHF (~\$532 million), falling 11% YOY as reported against a very easy comparison. The North American business saw revenue fall a staggering 40% YOY, while sales in the rest of the world (459 million CHF/~\$459 million) declined 3% YOY. For FY2016, global sales fell 5% YOY, with North American sales falling 26% and sales outside of North America falling 1%.
- Pooled "Big Three" revenue (Roche, J&J, and Abbott) totaled ~\$1.30 billion for the quarter, falling 5% YOY -subtracting out our estimate of EU Libre sales of ~\$75 million translates to a bigger decline of 11% decline in pooled YOY sales. Unsurprisingly, US weakness drove the pooled declines (17% decline YOY), while pooled revenue was flat internationally thanks to continued uptake of Libre overseas. For 2016, pooled global Big 3 sales fell 5% to under \$5 billion for the first time since we began tracking in 1Q12.
- The slide deck confirmed that the Accu-Chek Insight CGM is currently launching in Europe, and noted a 1Q17 US launch timeline for the Accu-Chek Guide BGM, on the earlier side of the previous "2017" launch plan.
- Contrary to popular media reports saying that Roche is exploring options for its Diabetes Unit (including sale, à la J&J), though a [Reuters report](#) published earlier today suggests that Mr. Diggelmann has since refuted these claims.
- US sales of Lucentis (intravitreal ranibizumab) fell 13% YOY as reported (14% in constant currencies) to 329 million CHF (~\$329 million) in 4Q16.

Roche CEO Severin Schwan led the company's [4Q16 financial update](#) this morning. Below, we bring you our top financial, pipeline, and therapy highlights from the call. There was no relevant Q&A.

Financial Highlights

1. Global Diabetes Care revenue totaled 532 million CHF (~\$532 million) in 4Q16, reflecting an 11% YOY decline against a very easy comparison (sales also fell 11% in [4Q15](#)). There is no doubt that the majority of the weakness comes from the North American segment, but the entire business is taking a hit - 22 of the last 28 quarters have seen negative YOY growth (and none of the positive growth quarters were greater than 5%). For the full year 2016, sales fell 5% YOY to ~2.0 billion CHF (~\$2.0 billion) against an easy comparison (sales fell 11% in 2015).

2. In North America, Diabetes Care revenue totaled 73 million CHF (~\$73 million), falling a staggering 40% YOY against a modest [4Q15](#) comparison (1% sales decline). Seven out of the past eight quarters, and four in a row, have now come in under the 100 million CHF mark. COO of the Diagnostics Division Mr. Roland Diggelmann sounded fatigued from having to repeatedly explain the effects of competitive bidding. After calling the US performance "very slow," he added "I should remind you that this is of course due to reimbursement cuts introduced as long as three years ago, which still have an impact on new contracts and are translating over to the private side." As a reminder, Roche stopped selling new pumps in the US [as of January 1](#).

3. Outside of North America, sales of 459 million CHF (~\$459 million) fell 3% YOY against an easy 14% decline in [4Q15](#). Annual sales outside of North America fell 1% YOY to ~1.7 billion CHF (~\$1.8 billion). According to [the Roche Annual Report](#), overall Diabetes Care sales declined in North America, Japan, and EMEA (though growth was seen in several markets); were stable in Asia-Pacific; and expanded in Latin America.

Pooled Financial Highlights

4. Pooled global revenue for the "Big Three" BGM companies (Roche, J&J, and Abbott) totaled ~\$1.30 billion, falling 5% YOY relative to pooled revenue in [4Q15](#) (~\$1.38 billion). This came against an easy comparison, as revenue declined ~10% [a year ago](#). As with last quarter, [Abbott](#) was the lone positive from the quarter, with 4% global growth and 16% international growth on the strength of Libre. What this means for BGM, however, is the field is actually doing worse; subtracting out our estimate of EU Libre sales of ~\$75 million translates to an 11% decline in global pooled YOY sales.

Device Pipeline Highlights

5. The [slide deck](#) noted that the Accu-Chek Insight CGM successfully launched in the EU in 2016. We assume this is referring to the controlled launch we first heard about at [EASD](#) - limited to "specialized diabetes centers" in the Netherlands, Norway, Denmark, and Sweden. Reps at EASD told us that this phase will last 6-9 months so that Roche can gather feedback before fully rolling it out in more countries in 2017.

6. The [slide deck](#) noted a 1Q17 US launch timeline for the Accu-Chek Guide BGM, on the earlier side of the previous "2017" launch plan. Mr. Diggelmann expressed hope that it will "protect and safeguard this franchise." This meter looks just like the Accu-Chek Connect and still includes Bluetooth, but features more accurate strips and a new vial design, among other features. It launched in Europe last year.

7. Effective the [beginning of 2017](#), Roche discontinued pump sales in the US to focus efforts on the launch of the Accu-Chek Guide BGM. This did not come as a surprise to us, but is a reminder of the fragile pump ecosystem and competitive environment.

8. The [slide deck](#) positions the Accu-Chek bG Instant System as a key 2017 launch in Europe. We're not familiar with this device, but perhaps it has a faster testing time or an all-in-one design like the Accu-Chek Compact. For context, the ancient-looking "Accu-Chek Instant Plus" meter was a BGM that also reported total cholesterol levels within three minutes.

9. According to [popular media reports](#), Roche may be considering options for the Diabetes Unit, including sale. We have heard such rumors for years and management did not officially comment on today's call, though a [Reuters report](#) published earlier today suggests that Mr. Diggelmann has since refuted these claims. J&J made a nearly identical public announcement on its [4Q16 call](#) last week. Roche's Diabetes business is definitely challenging, but on the other hand, management expressed commitment to the business, including the new Accu-Chek Guide BGM and the Accu-Chek Insight CGM.

10. Neither the expanded [Senseonics CGM distribution agreement](#) nor the [mySugr integration partnership](#) were mentioned on the call.

Therapy Highlights

11. US sales of Lucentis (intravitreal ranibizumab, prescribed for the treatment of diabetic macular edema and diabetic retinopathy) fell 13% YOY as reported (14% in constant currencies) to 329 million CHF (~\$329 million) in 4Q16; full year 2016 revenue dropped 8% YOY as reported (10% in constant currencies) to 1.4 billion CHF (~\$1.4 billion). Lucentis continues to face in-class competitive pressure, but on a brighter note, Roche filed with the FDA in October 2016 to expand Lucentis' indication to the treatment of diabetic retinopathy without DME.

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Therapy Highlights

11. Facing Continued Competitive Pressure, Lucentis Sales Fall 13% YOY and 12% Sequentially to \$329 Million

Financial Highlights

1. GLOBAL DIABETES CARE DECLINES 11% YOY IN 4Q16, 5% FOR THE FULL YEAR

Global Diabetes Care revenue totaled 532 million CHF (~\$532 million) in 4Q16, reflecting an 11% YOY decline against a very easy comparison (sales also fell 11% in 4Q15). There is no doubt that the majority of the weakness comes from the North American segment, but the entire business is taking a hit - 22 of the last 28 quarters have seen negative YOY growth (and none of the positive growth quarters were greater than 5%). In accordance with the pronounced seasonality of the diabetes business - sequential growth in Q2 and Q4, with sequential declines in Q1 and Q3 - worldwide sales grew 9.5% sequentially from 3Q16.

- **For the full year 2016, sales fell 5% YOY to ~2.0 billion CHF (~\$2.0 billion) against an easy comparison (sales fell 11% in 2015).** One glance at **Figure 2**, depicting the downward slope of Roche Diabetes Care's *annual* revenue, tells the whole story: At its peak in 2006, the business brought in just over 3.0 billion CHF, 50% more than 2016's revenue. In that same year, sales outside of North America (2.2 billion CHF) easily topped this year's global revenue.

FIGURE 1: GLOBAL, NORTH AMERICA, INTERNATIONAL QUARTERLY SALES (1Q11 - 4Q16)

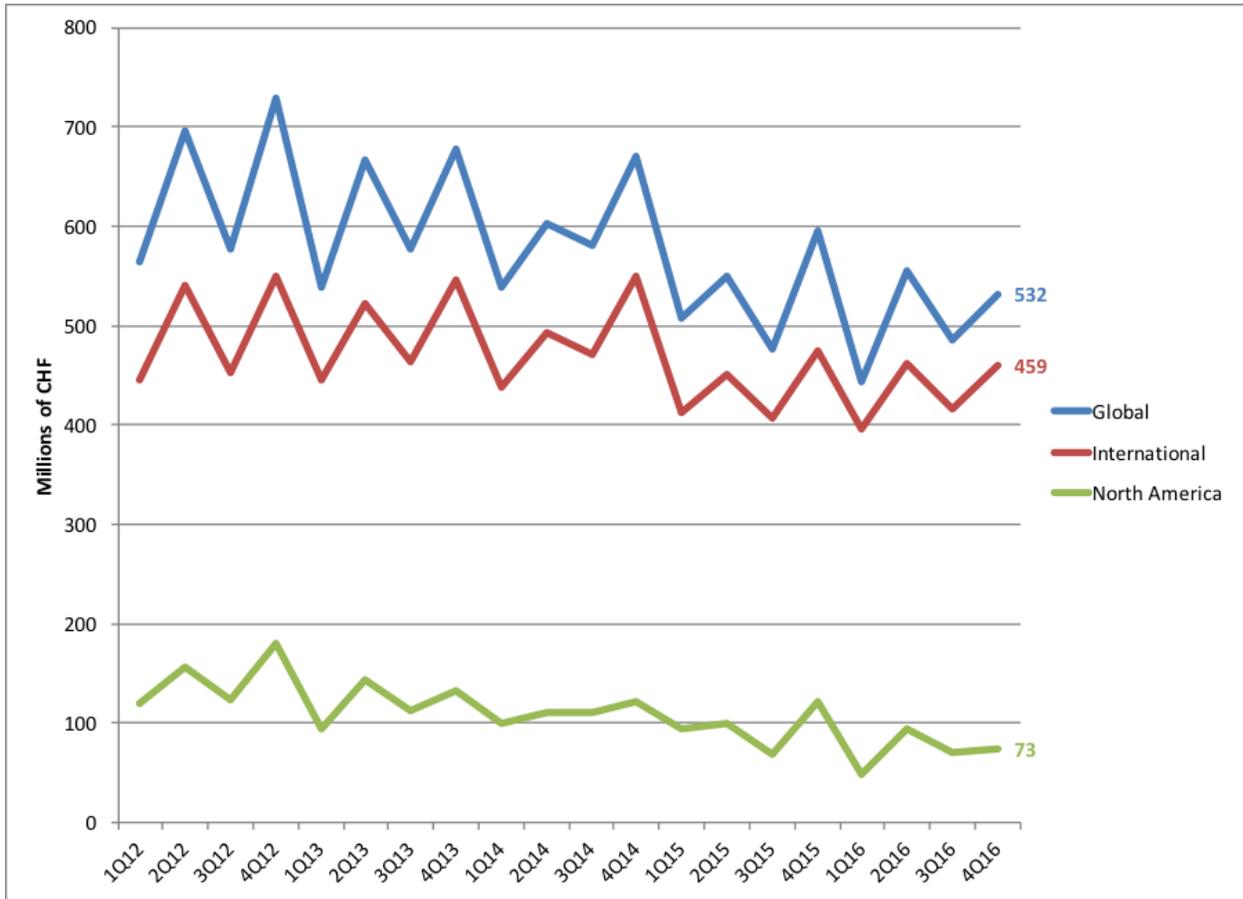
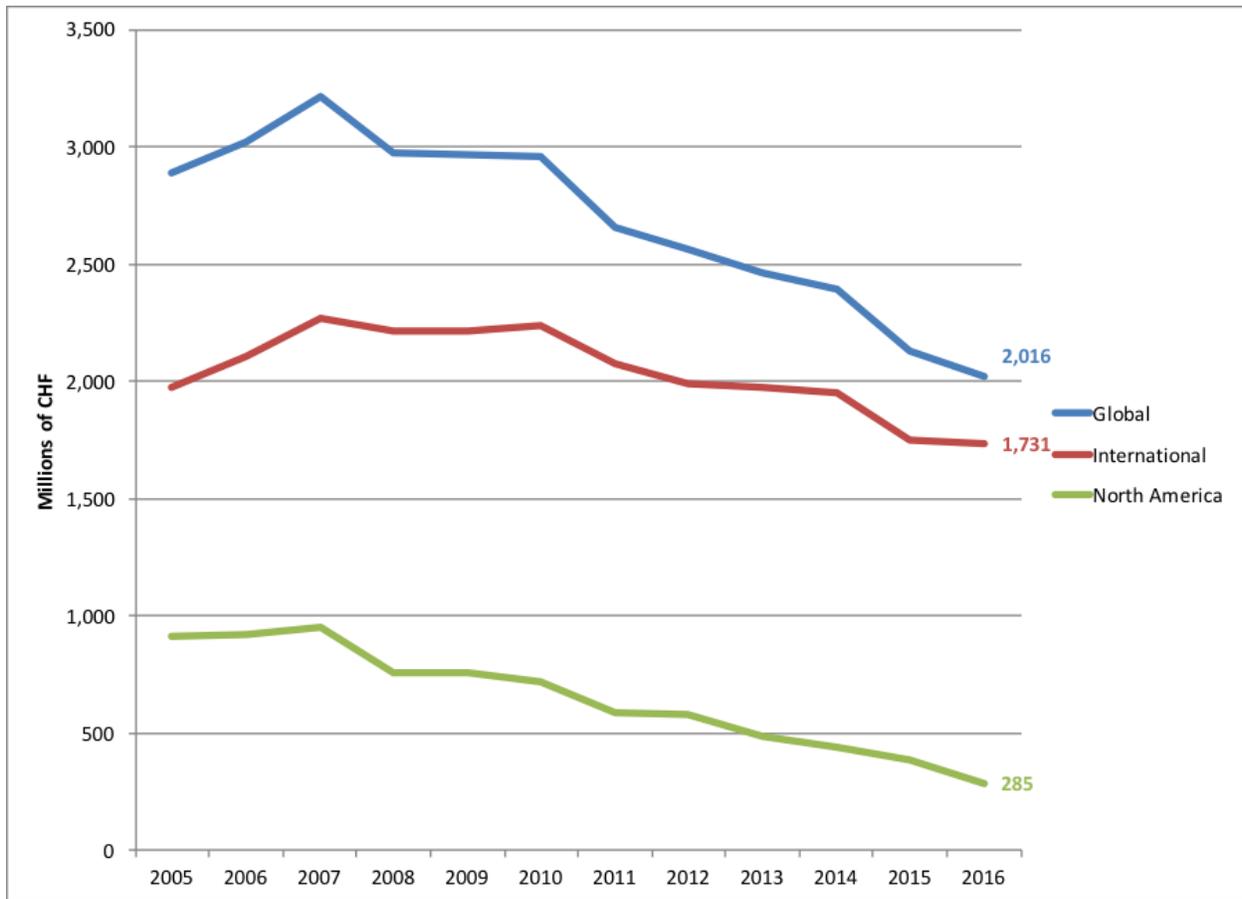
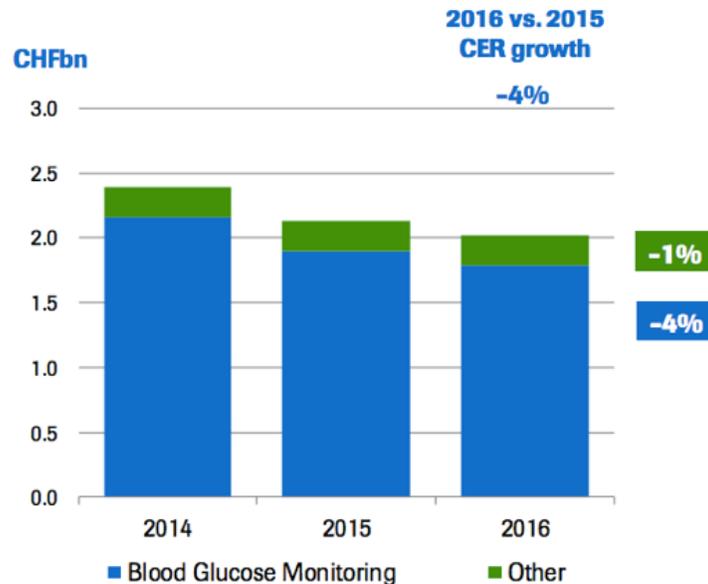


FIGURE 2: GLOBAL, NORTH AMERICA, INTERNATIONAL ANNUAL SALES (2005 - 2016)



- In constant currencies, BGM sales fell 4% YOY, while the other product lines of the Diabetes Unit (mainly insulin pumps, though the Accu-Chek Insight CGM underwent a limited EU launch toward the end of 2016) fell just 1% YOY.** It is no surprise that the SMBG business dragged down the diabetes portfolio given pricing pressures and competitive bidding, but the pump business isn't exactly flourishing - Roche discontinued US pump sales as of the [beginning of 2017](#).



CER=Constant Exchange Rates

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2. NORTH AMERICAN REVENUE DIPS 40% YOY DUE TO CONTINUED EFFECTS OF CMS' COMPETITIVE BIDDING

In North America, Diabetes Care revenue totaled 73 million CHF (~\$73 million), falling a staggering 40% YOY against a modest 4Q15 comparison (1% sales decline). Sequentially, sales grew 4%, but against the backdrop of a 26% sequential decline from 2Q16 to 3Q16. Seven out of the past eight quarters, and four in a row, have now come in under the 100 million CHF mark. In the first three quarters of 2016, COO of the Diagnostics Division Mr. Diggelmann said that competitive bidding led to a reduction of 20% in strip sales (it was unclear if he was referring to the global business or solely North America), and we might assume that this trend continued into the fourth quarter in the US - competitive bidding has taken its toll on all BGM companies. As a reminder, Roche stopped selling new pumps in the US as of January 1, though that probably wasn't responsible for most of the challenges.

- Mr. Diggelmann sounded fatigued from having to repeatedly explain the effects of competitive bidding.** After calling the US performance "very slow," he added "I should remind you that this is of course due to reimbursement cuts introduced as long as three years ago, which still have an impact on new contracts and are translating over to the private side." [Last quarter](#), he frustratingly referred to the CMS program as the "so-called competitive bidding process."
- On an annual basis, North American sales of 285 million CHF (~\$290 million) fell 26% YOY on a very easy comparison (13% YOY decline in 2015).** This is easily the lowest North American revenue for the Diabetes unit - it is the first time in our model (which goes back to 2005) that sales have fallen below 300 CHF. Furthermore, the green line in **Figure 2** (representing annual North American revenue) has been on a steady downward slope since 2007, when sales were more than 3x higher than they are this year.

3. REVENUE OUTSIDE OF NORTH AMERICA REMAIN FLAT FOR THE QUARTER

Outside of North America, sales of 459 million CHF (~\$459 million) fell 3% YOY against an easy YOY comparison (14% decline in [4Q15](#)). The disappointing quarter follows an encouraging trend set by two consecutive quarters of international revenue growth. The alternating up-down sequential pattern that has come to characterize the international business (see **Figure 1** above) continued this past quarter (10% sequential growth from [3Q16](#) following a 10% sequential decline in the previous quarter).

- **Annual sales outside of North America fell 1% YOY to ~1.7 billion CHF (~\$1.8 billion).** This comes against an easy comparison as sales declined 11% YOY in the full-year 2015. 2010 was the last year of positive annual growth for the segment. According to page 37 of [the Roche Annual Report](#), overall Diabetes Care sales declined in North America, Japan, and EMEA (though growth was seen in several markets); were stable in Asia-Pacific; and expanded in Latin America.

Pooled Financial Highlights

4. POOLED "BIG THREE" REVENUE FOR THE QUARTER FALLS 5% YOY; POOLED ANNUAL REVENUE BELOW \$5B FOR FIRST TIME IN OUR MODEL

Pooled global revenue for the "Big Three" BGM companies (Roche, J&J, and Abbott) totaled ~\$1.30 billion, falling 5% YOY relative to pooled revenue in [4Q15](#) (~\$1.38 billion). This came against an easy comparison, as revenue declined ~10% [a year ago](#). As with last quarter, [Abbott](#) was the lone positive from the quarter, with 4% global growth and 16% international growth on the strength of Libre. What this means for BGM, however, is the field is actually doing worse; subtracting out our estimate of EU Libre sales of ~\$75 million translates to an 11% decline in pooled YOY sales. Where will the big three BGM companies be in three years? Abbott is investing big time in FreeStyle Libre, Roche is moving into CGM (though also doubling down on BGM with its next-gen Accu-Chek Guide BGM system), and J&J announced on its [4Q16 earnings call](#) last week that it will be exploring strategic options for its Diabetes business (operating partnerships, joint ventures, strategic alliances, or a sale of the businesses). [Rumors are circulating once again that Roche may be doing the same with its Diabetes Unit](#), though that was not discussed on the call today (more below). There is room for innovation in service and business models, but will these large corporations continue to invest in BGM? Outside of the Big 3, Ascensia continues to innovate with its impressively accurate Contour BGM line, and partnered with Glooko to enable blood glucose data integration [just yesterday](#). On the plus side, based on the quarterly pooled revenue graph in **Figure 3**, it looks as if the BGM market may have bottomed out in 1Q16 (even with the deceptive effects of international Libre sales).

- **Pooled sales for the full year 2016 fell 5% from 2015 to just under \$5.0 billion - the first time in our model that sales have dropped below this mark.** This comes on an easy comparison to a 12% negative growth in 2015, and pooled Big 3 sales have now fallen for five consecutive years. Softness from the J&J and Roche Diabetes Care businesses were responsible for the decline this past year, as Abbott's sales actually grew 4% operationally YOY (though driven by FreeStyle Libre sales).

FIGURE 3: WORLDWIDE POOLED ROCHE, ABBOTT, AND J&J QUARTERLY SALES (1Q12 - 4Q16)

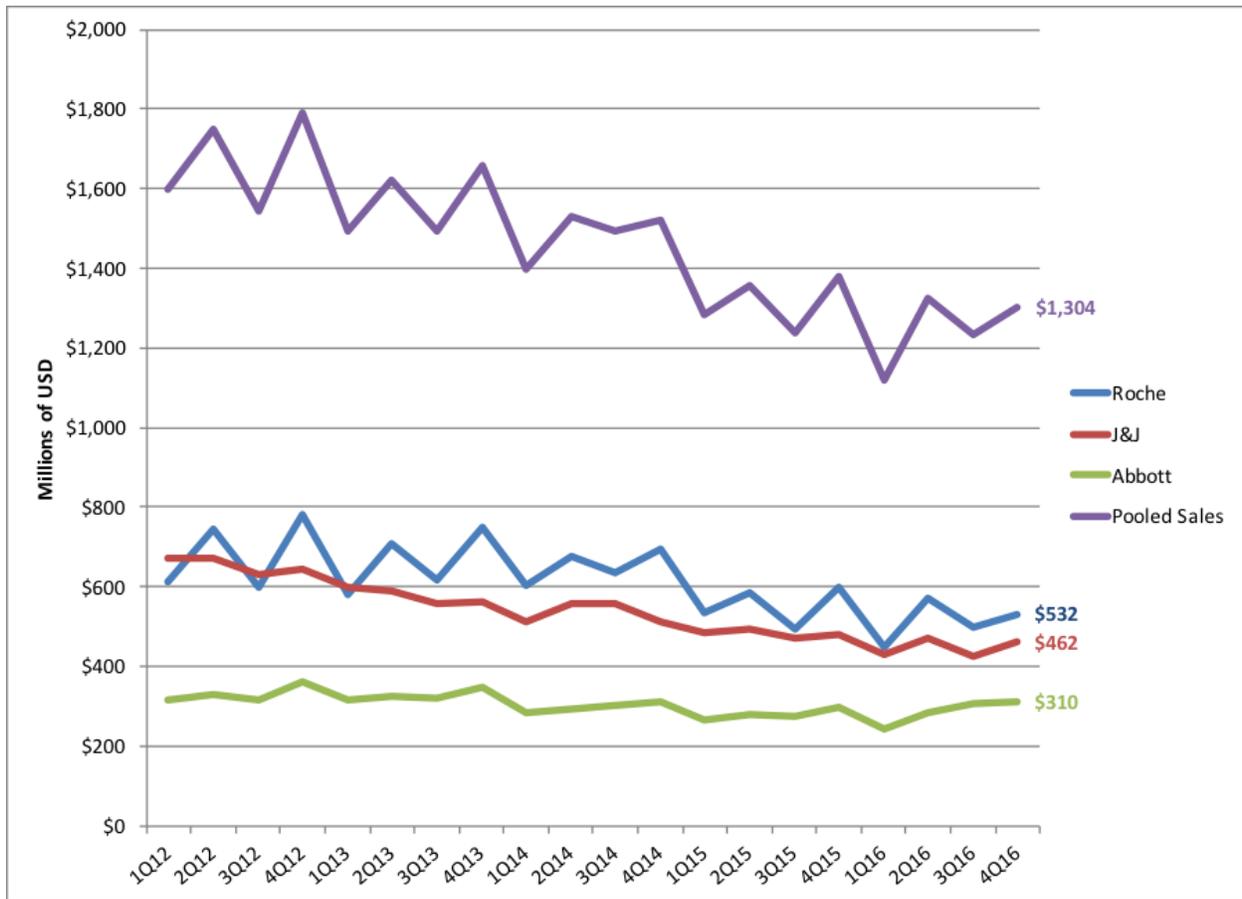
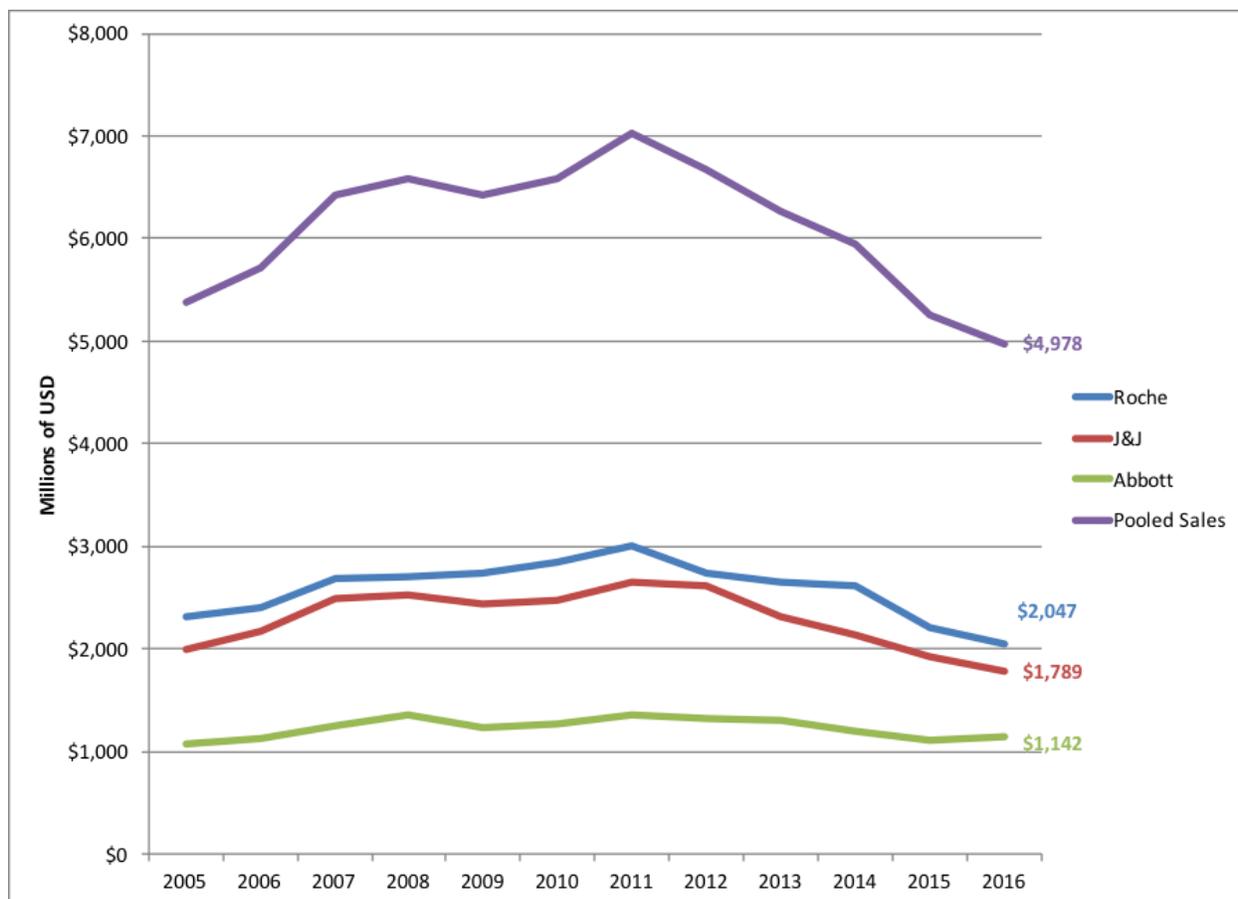


FIGURE 4: WORLDWIDE POOLED ROCHE, ABBOTT, AND J&J ANNUAL SALES (2005 - 2016)



- The US market, where pooled revenue fell a whopping 17% to just \$351 million, continues to plague all three BGM companies - no doubt a continued byproduct of pricing pressures and CMS' competitive bidding program.** This quarter's double-digit decline also came on an easy comparison to a 3% revenue decline in [4Q15](#). Roche had easily the roughest 4Q16 in the US, as sales fell 40% YOY, while [Abbott](#) was in the middle (-14%) and [J&J](#) fared only slightly better (-5%). Pooled US sales also fell 17% on an annual basis.
- The Big Three fared better internationally, where revenue of \$953 million was flat against an easy comparison (sales fell 12% in [4Q15](#)).** Sequentially, pooled revenue climbed 9%. [J&J](#) (down 1% YOY) and Roche (down 3% YOY) both performed better outside of the US, but that's not saying much, as both still saw negative growth for the quarter. Abbott, on the other hand experienced 16% operational growth driven by FreeStyle Libre sales. If estimated Libre sales of \$75 million are excluded from the pooled international calculation, then revenue fell 8% YOY. Similarly, pooling just J&J and Roche international sales suggests BGM sales declined 4% YOY outside of the US. Pooled international sales remained flat on an annual basis.
- As a reminder, direct BGM comparisons between Roche, Abbott, and J&J are impossible because each company's Diabetes Care business includes a fraction of non-BGM revenue that is not reported.** Roche has insulin delivery and will soon add CGM, J&J has Animas insulin delivery, and Abbott has continuous glucose monitoring (Navigator II, Libre) outside of the US.

Device Pipeline Highlights

5. ACCU-CHEK INSIGHT CGM LAUNCHES IN EUROPE

The [slide deck](#) noted that the Accu-Chek Insight CGM successfully launched in the EU in 2016. We assume this is referring to the controlled launch we first heard about at [EASD](#) - limited to "specialized diabetes centers" in the Netherlands, Norway, Denmark, and Sweden. Reps at EASD told us that this phase will last 6-9 months so that Roche can gather feedback before fully rolling it out in more countries in 2017. We hadn't heard any more about the launch status since September. In the CE Mark approval trial (n=36; details shared at DTM), the sensor performed with positive accuracy (overall MARD: 10.6%) and time lag (mean lag post-processing: 5.5 minutes). See our [EASD coverage](#) for a deeper dive into the CGM - how does it stack up to other options? - along with pictures.

6. ACCU-CHEK GUIDE BGM TO LAUNCH IN US IN 1Q17

The [slide deck](#) noted a 1Q17 US launch timeline for the Accu-Chek Guide BGM, on the earlier side of the previous "2017" launch plan. Mr. Diggelmann expressed hope that it will "protect and safeguard this franchise." In 3Q16, the next-gen Accu-Chek Guide BGM system was [approved by FDA](#) and [launched](#) in Denmark, Switzerland, and Australia (more countries will follow in 2017). The Guide BGM looks similar to the Accu-Chek Connect, but does offer several advantages: (i) a spill-resistant strip vial (easy to remove one at a time, less contamination); (ii) a new strip design (large sampling area, next-gen chemistry that is reportedly more accurate); (iii) Bluetooth compatibility with the Accu-Chek Connect smartphone app (Android and iOS, integrated bolus advisor); and (iv) on-board high-low pattern detection (key for staying competitive with LifeScan's OneTouch Reveal). It looks like a solid incremental improvement over Accu-Chek Connect, but nothing groundbreaking from what we can tell. Can it save the franchise, particularly in the battered US market? Of course, funds for innovation are at a premium right now, and the company is smart to use them to invest in CGM.

7. ROCHE NO LONGER SELLING INSULIN PUMPS IN THE US

Effective the [beginning of 2017](#), Roche discontinued pump sales in the US to focus efforts on the launch of the Accu-Chek Guide BGM. Roche conveyed that it will indeed "re-prioritize" its US efforts, though it is not exiting the US pump business altogether - current Accu-Chek Spirit and Accu-Chek Combo US patients will still receive supplies and service. The move does not come as a surprise: Roche has a very small share of the US pump market (2% in the dQ&A panel, <1% in the T1D Exchange); has now seen its North American Diabetes Care business (BGM + insulin delivery) come in under 100 million CHF (\$100 million) for six out of the past seven quarters; and lacks pump-CGM integration and a publicly disclosed pipeline to automate insulin delivery. As we noted in our [2016+2017 Reflections piece](#), the pump market has never been more fragile: from [Medtronic's exclusive deal with UnitedHealthcare](#) to become the single preferred durable pump supplier (effective July 1, 2016) shutting out other manufacturers, very challenging third quarters for [Tandem](#) and even [Medtronic](#) (disruption following the 670G approval), continued [sluggish sales for startups like Cellnovo](#), and continued discussion of adoption challenges and questions we've heard for years. Roche's appropriate response to this weakness is to shift its focus to the [2017 US launch](#) of the next-gen Accu-Chek Guide BGM and the controlled European rollout of its Accu-Chek Insight CGM. We see this deeper focus on glucose monitoring, particularly in the US, as a positive, since it's more of a strength for Roche than insulin pumps and since CGM is expanding. For now, this doesn't impact Roche's EU pump business, though we'll be interested to see how it moves forward with the Accu-Chek Insight pump with prefilled cartridges.

8. ACCU-CHEK BG INSTANT SYSTEM TO LAUNCH IN EU IN 2017

The [slide deck](#) positions the Accu-Chek bG Instant System as a key 2017 launch in Europe. We're not familiar with this device, but perhaps it has a faster testing time or an all-in-one design like the Accu-Chek Compact. For context, the ancient-looking "Accu-Chek Instant Plus" meter was a BGM that also reported total cholesterol levels within three minutes - we have no idea if there is any similarity here.

9. MANAGEMENT DISPELS RUMORS THAT ROCHE MAY LOOK TO SELL DIABETES UNIT

Popular media reports from yesterday claimed that Roche may be considering options for the Diabetes Unit, including sale, but a **Reuters piece** published today quotes Mr. Diggelmann referring to these assertions as "false." Alternatively, Mr. Diggelmann implied that Roche Diabetes is actually looking to expand, saying that "we basically have all of the technologies we need in-house in varying degrees of development, so we have to ask ourselves, 'How far are we along?' We're looking around: Are there new possibilities, are there alternatives?" Diggelmann later pointed out that regulators would block Roche's attempts to absorb J&J, but that wouldn't be of interest to the company anyways. CFO Alan Hippe commented that they would be more interested in smaller, targeted purchases aimed at adding novel technologies - we wonder if patch pumps, connected pens, or augmenting the CGM pipeline would be of interest. Of course, Roche already has an expansive distribution agreement with Senseonics and a partnership with mySugr.

- **We have heard these rumors for years and management did not officially comment on today's call.** J&J made a nearly identical public announcement on its [4Q16 call](#) last week. Roche's Diabetes business is definitely challenging, but on the other hand, management expressed commitment to the business, including the new Accu-Chek Guide BGM and the Accu-Chek Insight CGM.

10. SENSEONICS DISTRIBUTION AGREEMENT/MYSUGR INTEGRATION PARTNERSHIP NOT MENTIONED ON CALL

Neither the expanded **Senseonics CGM distribution agreement** nor the **mySugr integration partnership** were mentioned on the call. Per the updated agreement (announced in December), Roche will distribute the implantable CGM in all of Europe, the Middle East, and Africa, excluding Scandinavia (where Rubin Medical is the distribution partner), Finland, and Israel - Senseonics' lowered full-year revenue guidance in [3Q16](#) to just "\$250,000-\$300,000." We'll be interested to see how uptake is going and what the outlook is for 2017 on the company's upcoming call. The mySugr integration directly integrates the Accu-Chek Connect meter, and eventually the Insight CGM, into the popular mySugr Logbook (over 900,000 users globally!). It launched last April in Germany and Austria. We confirmed in early January that it has not yet launched in the US.

Therapy Highlights

11. FACING CONTINUED COMPETITIVE PRESSURE, LUCENTIS SALES FALL 13% YOY AND 12% SEQUENTIALLY TO \$329 MILLION

US sales of Lucentis (intravitreal ranibizumab) fell 13% YOY as reported (14% in constant currencies) to 329 million CHF (~\$329 million) in 4Q16. For the full year 2016, Lucentis revenue dropped 8% YOY as reported and 10% in constant currencies to 1.4 billion CHF (~\$1.4 billion). Sales also fell 12% sequentially between [3Q16](#) and 4Q16, despite the [early 4Q16 FDA approval](#) of a pre-filled syringe for Lucentis, which Roche management hoped would spark increased uptake because of the added patient convenience of a ready-to-use option. Perhaps with more time on the market, the pre-filled syringe will have a greater impact - something we'll be watching closely. The company's [financial report](#) emphasizes how Lucentis continues to face heavy competitive pressure. Novartis, which markets the drug ex-US, has also [acknowledged](#) in-class competition from Bayer/Renegeron's Eylea (intravitreal aflibercept) and Genentech's Avastin (bevacizumab), and we think Lucentis' higher list price vs. Avastin can only exacerbate the commercial challenges. In line with this, Novartis [recently reported](#) a 9% YOY decrease in ex-US Lucentis sales for 4Q16 and an 11% YOY decrease for 2016. Moreover, quarterly revenue from US Lucentis sales, as reported by Roche, has declined YOY with near consistency for the past two years (3Q16 was the exception, with 14% YOY growth as reported, though revenue still declined 8% YOY in constant currencies).

- **Roche filed Lucentis for the treatment of diabetic retinopathy without DME to the FDA in October 2016.** Assuming a standard 10-12 month review process, a regulatory decision is

expected in late 3Q17 or early 4Q17. We imagine that a broader indication may be able to boost Lucentis' performance, especially as Eylea is not currently approved for diabetic retinopathy without DME either.

- **Roche's [presentation slides](#) highlighted several ongoing clinical trials of Lucentis, although there was no mention of the [protocol T study](#) comparing Lucentis head-to-head with Eylea. [Two-year data from protocol T](#) found no significant difference in visual outcomes, number of injections needed, or doctor's visits in Lucentis-treated vs. Eylea-treated patients with DME. We imagine that follow-up data showing an advantage to Lucentis could meaningfully boost volume and revenue, but Roche management has been silent about the trial since two-year data was published mid-2016. Diabetes-relevant studies that were mentioned in the company's presentation include:**
 - **The phase 2 [BOULEVARD trial](#)**, investigating Lucentis vs. placebo in patients with center-involving DME (a condition in which the central macula is damaged in patients with diabetes), expected to complete in October 2017 according to [ClinicalTrials.gov](#); and
 - **The phase 2 [LADDER study](#)**, a four-arm trial (n=220) looking at intravitreal delivery of ranibizumab vs. delivery via implant, expected to complete in May 2018 according to [ClinicalTrials.gov](#). The end goal of this study is to expand Lucentis' indication to a port delivery device. We imagine that many patients may prefer the convenience of an implanted delivery device over monthly intravitreal injections administered by a healthcare provider (with comes with the added hassle of making regular office appointments, etc.) We expect that more patient choice when it comes to drug delivery will be beneficial on both sides - Lucentis revenue as well as the care offered to people with visual complications of diabetes. While the newly-available pre-filled syringe largely increases physician convenience in administration, we view a potential implantable option as a step forward for patient convenience and it may be able to boost sales more than what we've seen thus far with the pre-filled syringe.

-- by Brian Levine, Payal Marathe, Adam Brown, Helen Gao, and Kelly Close