Consumer Digital Health
How Market Shift Is Leading to New Opportunities

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Consumer Digital Health: Market Shifts to Focus on Engagement and Improved Patient Outcomes

Investment trends in digital health are shifting from consumer wellness applications to clinically driven solutions that drive better health outcomes at lower costs.

This next wave of financing focuses on encouraging consumers and patients to change health-related behaviors, underscoring the greater opportunities for companies with solutions that create value for payers, providers, employers and consumers.

This is the second in a series of reports from SVB Analytics examining Digital Health. In this report we:

- Analyze broad consumer health trends and business models
- Examine the shift in investments from consumer wellness to clinically focused solutions
- Describe adaptation strategies of consumer wellness and wearables companies
- Explore potential areas of opportunity in disease management
In our first report, we provided a framework that landscaped the digital health sector. In this report, we focus on consumer digital health investment trends.
Focus on Consumer Health: Categorizations

For our analysis, we looked at three key themes: clinical enablement, consumer activation and education and transparency.

We also grouped consumer digital health into seven categories, and focused on fitness/wellness and disease management.
About 55% of all digital health investments since 2011 have been in companies whose technologies interface with the consumer in some manner. This reflects the convergence of technologies to drive and measure improved health outcomes and cost savings, and funding is following.
Strategic Investors Actively Investing in Consumer Digital Health

The number of deals with strategic investors participating has slowly increased over time, as tech, life science, healthcare and insurance companies seek to partner and collaborate with startups.

* Crossover investments represent investment rounds greater than $100M that are led by a crossover investor

Source: Rock Health Database; 2011-2016Q2
SVB Analytics Analysis
2016(E) is extrapolated based on 2016HY
Strategic investors have recently shifted their attention to clinically focused startups as they begin to see how technologies designed to affect patient behavior can generate better health outcomes and cost savings.

* Crossover investments represent investment rounds greater than $100M that are led by a crossover investor

Source: Rock Health Database; 2011-2016Q2
SVB Analytics Analysis
2016(E) is extrapolated based on 2016HY
Healthcare Consumers: Fundamental Needs of the User
### Overview: Empowering Patients Is Key to Fixing Healthcare System

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Fundamental Need</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of choice and price transparency</td>
<td>Consumer-Friendliness</td>
<td>Improve consumers' access to healthcare and their user experience by making healthcare easier to use</td>
</tr>
<tr>
<td>Poor health literacy</td>
<td>Knowledge</td>
<td>Create access to education and relevant and personalized health information</td>
</tr>
<tr>
<td>Lack of tools to manage health and wellness</td>
<td>Engagement</td>
<td>Engage and affect behavioral change in healthcare consumers to better manage their own health</td>
</tr>
</tbody>
</table>
Consumer Digital Health Framework

**Knowledge**
- Genetic Screening
- Education
- Professional Search
- Insurance Search

**Engagement**
- Social Support (incl. Fitness/Wellness)
- Disease / Medication Management (incl. Fitness/Wellness)
- Remote Monitoring
- Digital Therapeutics / Pill Plus
- Patient-Clinician Communication (incl. Telemedicine)
- Fitness / Wellness / Wearables / Tracking (for leisure)

**Consumer-Friendliness**

**Challenge:** Lack of choice and price transparency

**Solution:** Improve consumers’ access to healthcare and their user experience by making healthcare easier to use

**Knowledge**

**Challenge:** Poor health literacy

**Solution:** Create access to education and relevant and personalized health information

**Engagement**

**Challenge:** Lack of tools to manage health and wellness

**Solution:** Engage and affect behavioral change in healthcare consumers to better manage their own health
Consumer Digital Health Framework

**Knowledge**

Challenge: Poor health literacy
Solution: Create access to education and relevant and personalized health information

**Engagement**

Challenge: Lack of tools to manage health and wellness
Solution: Engage and affect behavioral change in healthcare consumers to better manage their own health

**Consumer-Friendliness**

Challenge: Lack of choice and price transparency
Solution: Improve consumers’ access to healthcare and their user experience by making healthcare easier to use
Financing Trends: Shift Toward Clinically Driven Consumer Health
The advent of the quantified self movement in the early 2010s attracted significant capital, especially in the fitness and wellness category.

Source: Rock Health Database Q2 2016, Pitchbook, 2011-2016 Q2; SVB Analytics Analysis
2016(E) is extrapolated based on 1H 2016
There has been a gradual shift toward increased investment activity in the more clinically focused categories of disease management, remote monitoring and communications.

Source: Rock Health Database Q2 2016, Pitchbook, 2011-2016 Q2; SVB Analytics Analysis
2016(E) is extrapolated based on 1H 2016
Financing Trends: More Clinically Focused Companies Receiving Early-Stage Funding

Investment Amount by Stage of Development (2011 – Q2 2016)

The clinically focused areas of disease management and patient-provider communications are seeing an increase in early-stage funding, indicating new startup formation; consumer activation and education and transparency companies are maturing, with fewer early-stage rounds raised.

Source: Rock Health Database Q2 2016, Pitchbook, 2011-2016 Q2; SVB Analytics Analysis
2016(E) is extrapolated based on 1H 2016
Early – Seed and Series A, Mid – Series B and C, Late – Series D and later
Fitness/Wellness: Adapting To The Market
Fitness/Wellness: Decline in Valuations and Investment Size

Valuations and financing round sizes have declined in 2016 due to increased competition and shifting investor interest toward clinical applications, forcing wellness companies to adapt.

Source: Pitchbook, 2011-2016 Q2; SVB Analytics Analysis
## Fitness/Wellness: Companies Adapt to Changing Marketplace

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Exit</strong></td>
<td>Sell business to strategic partners</td>
<td><strong>BASIS</strong></td>
</tr>
<tr>
<td><strong>Acquire</strong></td>
<td>Acquire companies to build clinical programs</td>
<td><strong>myfitnesspal</strong></td>
</tr>
<tr>
<td><strong>Partner</strong></td>
<td>Partner with academic institutions to conduct clinical studies and provide ancillary data</td>
<td><strong>JAWBONE</strong></td>
</tr>
<tr>
<td><strong>Develop</strong></td>
<td>Develop features or pivot business model in order to collect real world data or gather clinical-grade data</td>
<td><strong>fitbit</strong>  &lt;br&gt; <strong>Amc10</strong> &lt;br&gt; <strong>striiv</strong> &lt;br&gt; <strong>SCANADU</strong> &lt;br&gt; <strong>AliveCor</strong></td>
</tr>
</tbody>
</table>

As investors move toward more clinically focused strategies, wearables and wellness companies are executing different strategies to adapt to this shifting landscape.
## Fitness/Wellness: Exit to Sports and Fashion Companies

“If you don’t have a brand, it is hard to be legit in this space.”
– Sonny Vu, Chief Executive and co-founder of Misfit

<table>
<thead>
<tr>
<th>Acquirer</th>
<th>Target</th>
<th>Date</th>
<th>Deal Value ($M)</th>
<th>Invested Capital (IC $M)</th>
<th>EV / IC Multiple</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASICS</td>
<td>runkeeper</td>
<td>2/12/2016</td>
<td>$85M</td>
<td>$16M</td>
<td>7.4x</td>
</tr>
<tr>
<td>Adidas</td>
<td>runtastic</td>
<td>8/5/2015</td>
<td>$235M</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Under Armour</td>
<td>myfitnesspal</td>
<td>2/4/2015</td>
<td>$474M</td>
<td>$18M</td>
<td>26.3x</td>
</tr>
<tr>
<td>Under Armour</td>
<td>endomondo</td>
<td>2/4/2015</td>
<td>$85M</td>
<td>$6M</td>
<td>13.7x</td>
</tr>
<tr>
<td>Under Armour</td>
<td>mapmyfitness</td>
<td>12/6/2013</td>
<td>$150M</td>
<td>$24M</td>
<td>6.3</td>
</tr>
<tr>
<td>Fossil</td>
<td>Misfit</td>
<td>11/11/2015</td>
<td>$250M</td>
<td>$64M</td>
<td>3.9x</td>
</tr>
<tr>
<td>Intel</td>
<td>BASIS</td>
<td>3/25/2014</td>
<td>$100M</td>
<td>$37M</td>
<td>2.7x</td>
</tr>
</tbody>
</table>

Facing declining investor interest, companies that are not adopting clinical strategies are instead choosing to sell to sports and fashion retailers. Among those, software-focused firms are receiving the highest exit multiples.

Source: Capital IQ
SVB Analytics Analysis
Wall Street Journal - Fossil Group to Buy Misfit for $260 Million
## Fitness/Wellness: Companies Partner, Acquire or Develop Clinical Technologies

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumer</th>
<th>Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>Acquire</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jawbone</td>
<td>Acquisition + Personnel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Two 510k approvals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Real-time patient monitoring on physician smartphone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CEO of Spectros becomes Chief Medical Officer of Jawbone</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td>Acquisition + Personnel</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Acquire
- **Jawbone**
  - **Acquisition**
    - BodyMedia
  - **Spectros**
    - CEO of Spectros becomes Chief Medical Officer of Jawbone

### Partner
- **Fitbit**
  - **$6.5B IPO**
  - **Partnership** Study on weight loss and breast cancer prevention
  - **Announcement** 200 clinical studies run on Fitbit/Fitabase App
  - **Hire** VP Digital Health from Walgreens

### Develop
- **Scanadu**
  - **Kickstarter**
    - Branded as DIY Vital Signs Device
  - **Regulatory**
    - Announces Plans for 510K Submission
  - **$10.5M Series A**
    - Forms clinical advisory board
    - Announces plans for clinical trials
  - **$35M Series B**
    - Used for clinical development and regulatory approval in U.S. and China

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Jawbone, Fitbit, and Scanadu started in consumer wellness and have made acquisitions, formed partnerships, and started internal developments to adapt to the changing marketplace.

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Source: Company Press Releases, Mobihealthnews, FastCompany, clinicaltrials.gov, Fitbit S-1
Disease Management: Growth Opportunities
*Includes both Disease Management and Remote Monitoring companies and deals
Source: Rock Health Database Q2 2016, Pitchbook, 2011-2016 Q2;
SVB Analytics Analysis
“I don’t think you can scale a business in healthcare without working directly with the clinical entities like payers and providers.”

– TJ Parker, CEO
How PillPack Is Taking on Medication Management: An Interview with TJ Parker, CEO, PillPack

PillPack

Online pharmacy that uses technology to help people take medication in a timely manner

Problem

Most EXPENSIVE patients take 5+ prescriptions / day and have trouble coordinating their medication.

Solution

Manage complexity for patients
• Automated sign up and refills
• Coordination with payers
• Staff available 24/7

Operating in the Clinical Space

Consumer health companies need to develop sound business models because the patient is not the only customer – the payer is also the customer.

Advice to Entrepreneurs

• Spend time with your consumers: figure out their pain points and understand their core problems. And whether you can solve their problems with technology alone or if you need to become a provider.
• Know who your customers are and what they are willing to pay for.

Key Success Factors for Consumer-Centric Disease Management:
Expertise in Both Healthcare and Technology | Patient-Centric Design

“The healthcare system is moving towards a pay for performance model. Pharmacy should do the same and no one is truly doing that today.”

Source: Interview with TJ Parker, August 19, 2016
Disease Management: Increasing Focus on Behavioral Change and Complex Disease Management

Number of Investments in Disease Management and Remote Monitoring Sectors (2011 – Q2 2016)

There has been a steady rise in investments in companies aimed at behavioral change, while the niche targeting complex diseases is more nascent.

Source: Rock Health Database Q2 2016, Pitchbook, 2011-2016 Q2; SVB Analytics Analysis
2016(E) is extrapolated based on 1H 2016
Degenerative and complex diseases, which are difficult to manage and account for a significant portion of U.S. medical expenditures, have received comparatively lower digital health investments, signaling the space is ripe for disruption.

Source: Rock Health Database Q2 2016, Pitchbook, 2011-2016 Q2; SVB Analytics Analysis
AHRQ - Total Medical Expenditure by Conditions in US, 2013
Market Outlook: Assessing Consumer Health Opportunities
Progression to Clinically Driven Consumer Health Solutions

We have seen the sector's focus move from traditional devices aimed at a specific solution to consumer devices. Now, the focus is on digital solutions for disease management. Going forward, clinically proven software and hardware will be integrated to drive better health outcomes and cost savings.

Source: Pitchbook, Company websites
SVB Analytics analysis
About the Authors

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Steve Allan is the Head of SVB Analytics, responsible for the three areas of information services provided to the innovation economy: Strategic Advisory Services, Compliance Valuations, and Insights. Strategic Advisory Services provides consultative guidance around valuations, benchmarking and inorganic growth strategies. Compliance Valuations issues valuation opinions for private companies. Insight focuses on studying trends and opportunities in the private venture-backed innovation ecosystem. Steve brings a strong financial background and passion for entrepreneurship to his role at SVB Analytics.

Steve earned a master’s in business administration from Duke University's Fuqua School of Business and a bachelor’s degree in finance from the University of Notre Dame.

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Prior to joining SVB Analytics, Emily worked as a business analyst at BioMotiv, an early stage biotech accelerator. Emily graduated cum laude from University of Pennsylvania, where she earned a bachelor of science in economics and a bachelor of arts in biology.

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Scott holds a master's degree in business administration from the Haas School of Business (University of California at Berkeley), and a bachelor's degree in human biology from Occidental College.

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About Silicon Valley Bank
For more than 30 years, Silicon Valley Bank has helped innovative companies and their investors move bold ideas forward, fast. SVB provides targeted financial services and expertise through its offices in innovation centers around the world. With commercial, international and private banking services, SVB helps address the unique needs of innovators.

About SVB Analytics
SVB Analytics, a non-bank affiliate of Silicon Valley Bank, serves the strategic business needs of entrepreneurs, corporates and investors in the global innovation economy. For more than a decade, SVB Analytics has helped global business leaders make informed decisions by providing market intelligence, research, and consulting services. Powered by proprietary data, SVB Analytics has a unique view into the technology and life science sectors.

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