

Foodtech

Q1 2020

Report preview

The full report is available through the PitchBook Platform





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Executive summary

The COVID-19 pandemic has drastically affected how consumers obtain food.

Government-mandated shelter-in-place orders and shuttering of non-essential businesses has driven a surge in demand for food delivery and ecommerce services and has caused more consumers to prepare meals at home. Although the pandemic has largely hurt restaurants, downloads for restaurant and grocery delivery apps were up significantly in March, and we expect to see accelerated adoption in the near term. Meal kit providers, which have been struggling in a challenging operating environment, have noted revitalized consumer interest due to the pandemic, with Blue Apron (NYSE: APRN) stock up over 4x from pre-crisis levels.

Our long-term views on delivery services remain consistent with our pre-pandemic views. Restaurant and grocery shopping habits will continue to shift digital as more consumers use apps and marketplaces—a trend that has been accelerated by the pandemic. While renewed demand for meal kit delivery provides a second chance to build a more durable product-market fit with consumers, we continue to have longer-term doubts about the sustainability of this business model. In the near term, high unemployment and a weak economy will favor employers when it comes to labor supply. However, longer-term, we see opportunities for automation in production and delivery. Food robotics, autonomous delivery, fresh vending concepts and other novel technologies will facilitate human-free interactions that could provide speed, safety and reliability.

The pandemic is affecting consumption patterns, as well. We believe COVID-19 is affecting plant-based foods in the following ways: 1) the spike in grocery sales is potentially attracting new customers to try plant-based products if traditional meat and dairy are temporarily out of stock 2) providers focused on restaurant sales channels (i.e. **Impossible**

Foods and **Rebellyous Foods**) are likely struggling more than those focused on grocery sales channels 3) supply chain disruption could be exacerbated as the industry's supply chain is newer and not as durable.

Cellular agriculture does not appear to face any immediate impacts from the pandemic because there has not yet been any commercialization in the industry. However, we believe that significant disruption to the investment environment could negatively affect companies within the segment. Prolonged economic turmoil will lead investors to focus funding into cash flow positive opportunities, potentially starving cellular agriculture startups and extending development cycles.

This report provides an overview of the emerging foodtech ecosystem and the key VC-backed foodtech companies attracting attention and VC investment. Our foodtech market map segments foodtech companies that have received VC funding from 2015 to date. We have limited our search to only those companies that have received over \$10 million in total invested capital and other companies that we felt were important to highlight. We recognize that some startups could belong in multiple segments or even in different industries (i.e. restaurant tech, agtech, ecommerce, mobile commerce or robotics) and have placed them within the categories that best match our understanding of the primary consumer use case. Overall, we view the burgeoning foodtech ecosystem as vibrant, unique and poised for significant technology-driven growth.



Foodtech market map

Bio-engineered foods



Plant-based meat and dairy



Cellular agriculture



Meal replacements



Food suppliers



Online grocers



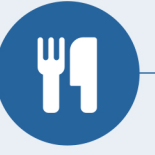
B2B suppliers



Novel ingredients



Intermediaries and delivery



Delivery robots



App & marketplaces



Ghost kitchens



Meat kits



Catering



Discovery & review



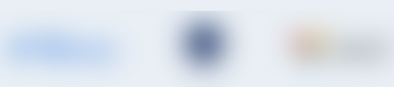
Personalized nutrition



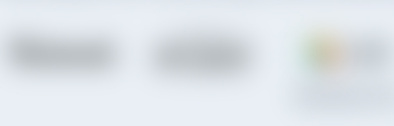
Food & beverage discovery



Restaurant recommendations & review



Recipes & cooking communities



Industrial & consumer tech



Kitchentech & robotics



Food waste & traceability



Companies included are VC-backed, segmented by primary use case and sorted by total capital raised.

SEGMENT DEEP DIVE

Intermediaries & delivery



INTERMEDIARIES & DELIVERY

Opportunities

Category expansion: Competition and commoditization have driven providers to seek a new avenue for growth. The coronavirus crisis has also created opportunities to deliver other kinds of products in new merchant categories. **DoorDash** announced on April 1, 2020 that it would be partnering with convenience stores to offer household products. We expect to see more expansion into convenience by major food delivery providers.

Delivery aggregation management: A growing headache for restaurant operators is managing multiple providers of delivery and ordering services at the point of sale. Some restaurants may utilize eight or more tablets, cluttering the register, complicating order pickup, and eating up time and resources. Order aggregation startups such as **Chowly** and **It's-a-Checkmate** seek to reduce this complexity by integrating meal delivery platforms into a single interface. Other startups in this space include **Ordermark** and **Olo**.

Delivery robots: Autonomous delivery could help propel the next phase of growth for food suppliers. As last-mile delivery is estimated to comprise as much as 28% of total transportation costs, delivery robots and other driverless methods could dramatically improve the economics of food delivery for both suppliers and consumers. Autonomous delivery startup **Nuro** partnered with Kroger in early 2019 to pilot autonomous grocery delivery. Recent autonomous delivery legislation passed in California is a notable milestone paving a regulatory path for future delivery robots. We expect that it will be years before autonomous delivery is ready for mass consumer adoption. Existing players include **Nuro**, **Starship**, **Kiwibot** and **Robomart**.

Leveraging ridesharing infrastructure: Delivery companies such as Indonesia's **Gojek** and Singapore's **Grab Holdings** are leveraging existing ridesharing infrastructure to expand into an increasing number of businesses. Food delivery is quickly becoming a leading revenue driver for these super apps. A growing list of services—including medicine delivery, auto repair, home cleaning, massage services—are helping build stickiness on these super app platforms.

Serving smaller cities and rural markets: The intermediaries & delivery market is highly competitive for several reasons, including limited price elasticity of consumers and larger providers' ability to subsidize pricing via VC funding. To help reduce costs, most operators compete in large urban markets where travel distances are short, and the concentration of drivers, restaurants and consumers is high. Consequently, many smaller cities are underserved, leaving an opportunity for startups to penetrate those markets. Both **DoorDash** and **Wolt** have started focusing efforts on suburban markets, turning to AI & ML technology for help. Continued development of these technologies and autonomous delivery are likely to help drive opportunity in these markets.

Considerations

Maturing market dominated by incumbents: An overcrowded playing field has led to consolidation and aggressive competition. Market leaders are solidifying positions in many large metropolitan markets. GrubHub and Uber Eats represent approximately 70% of US food delivery and are rapidly expanding in regional markets.³ We believe this leaves little room for new entrants without differentiated offerings.

³: "Foodservice Delivery in U.S. Posts Double-Digit Gains Over Last Five Years With Room to Grow," The NPD Group, April 3, 2018

SEGMENT DEEP DIVE

Food suppliers



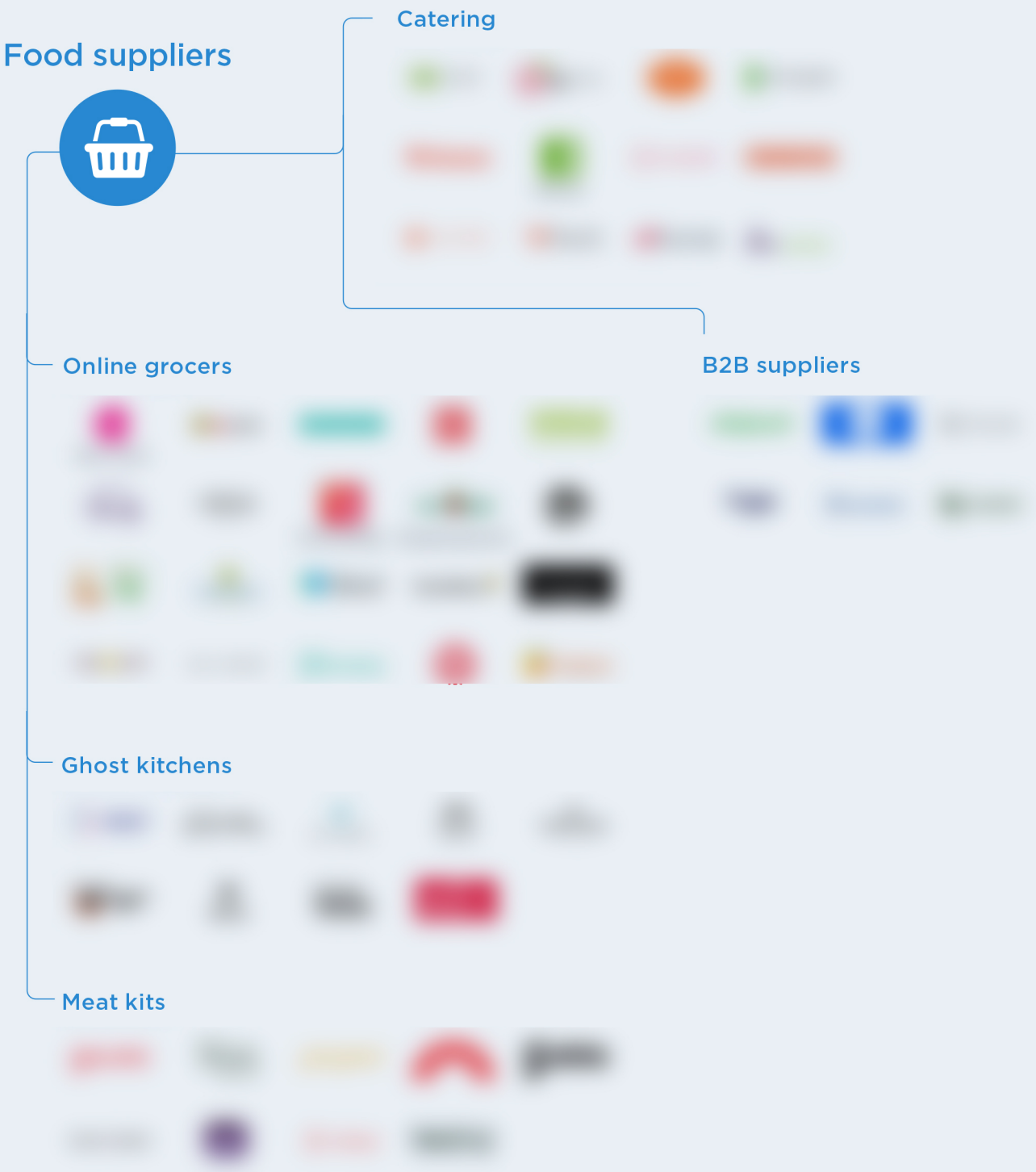
FOOD SUPPLIERS

Overview

Companies in this category utilize innovative digital technologies to manufacture or distribute food to consumers or other businesses, often selling their goods directly to consumers via an app. Food suppliers include fully digital-enabled startups, as well as incumbents (such as grocers), focused on adding digital solutions to their existing operations. Subsegments include:

- **Meal kits:** Companies that sell recipes and provide customers with the complete and fresh ingredients to prepare those recipes at home, saving customers the time and effort to find new recipes and shop for ingredients
- **Online grocers:** Online grocery stores that allow customers to order grocery goods for pickup or delivery
- **B2B suppliers:** Web-based grocery vendors that sell directly to food businesses in innovative ways
- **Ghost kitchens:** Commercial kitchens serving meal delivery platforms that operate without a brick-and-mortar dining experience for patrons. These companies operating within these kitchens may be delivery-only brands, or expansion kitchens extending the reach of existing restaurants.
- **Catering:** Companies who cater meals for school, office and event functions

While large incumbents dominate the space, newer startups (such as online Costco equivalent **Boxed** and online farmer’s market **Good Eggs**) are benefiting from differentiated models.



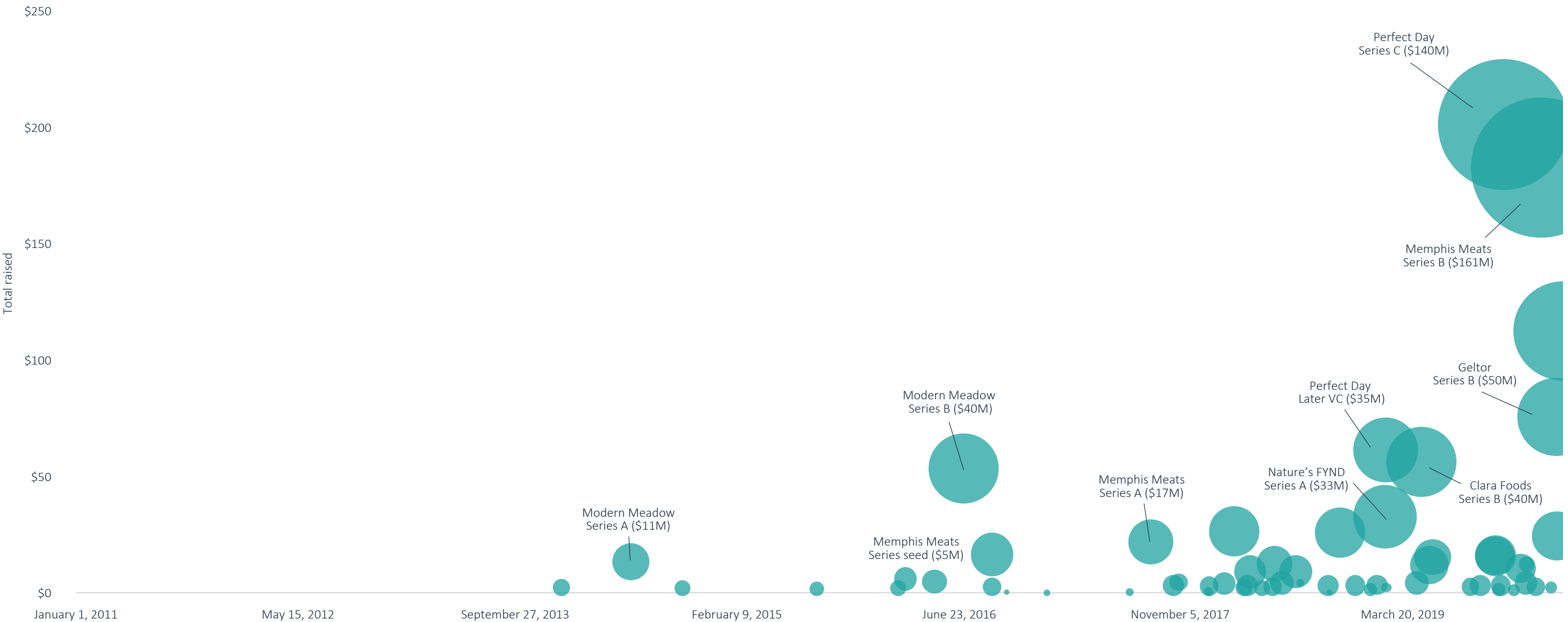
SEGMENT DEEP DIVE

Cellular agriculture



CELLULAR AGRICULTURE

Figure 34.
Cellular agriculture VC deals by total capital raised (\$M)



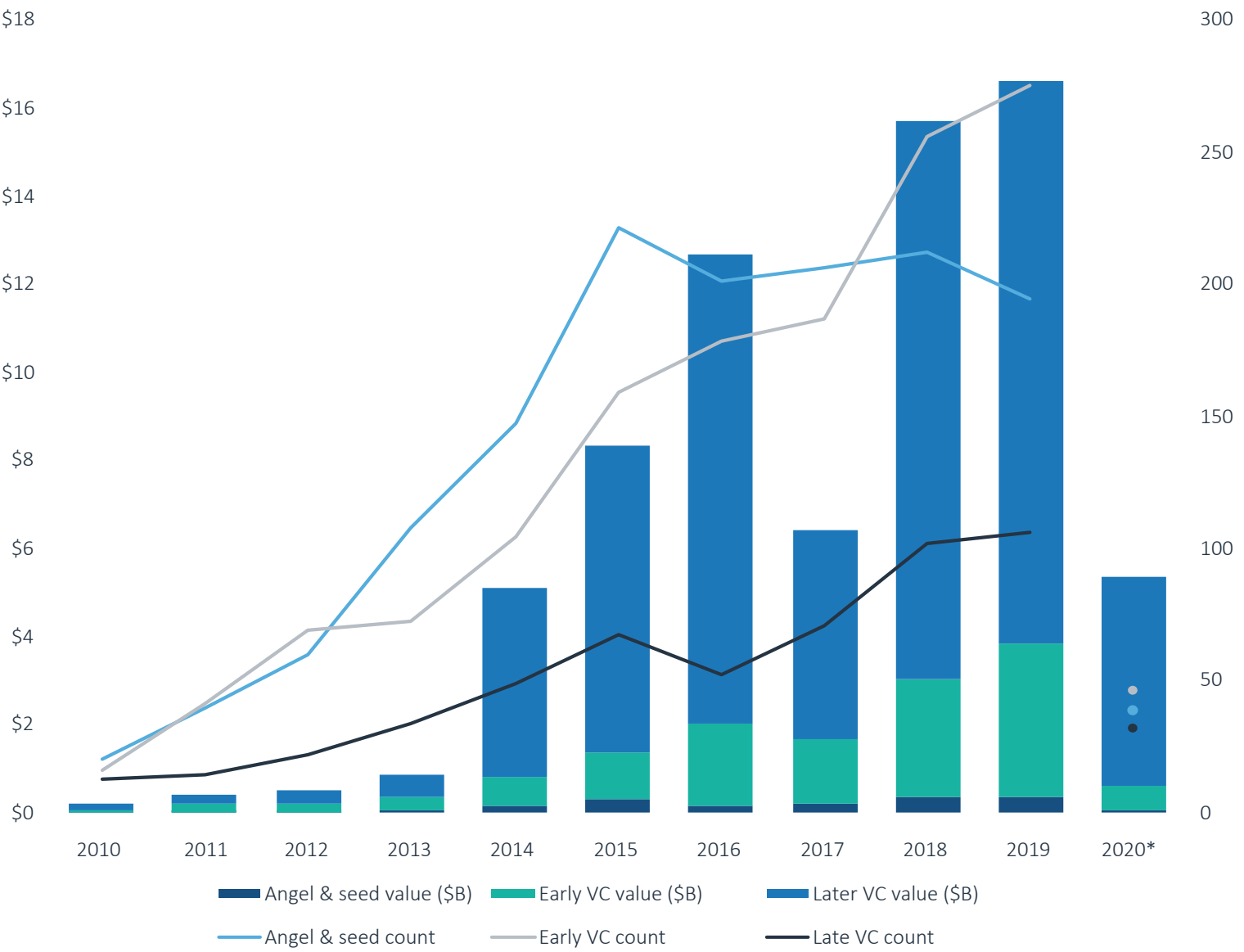
Source: PitchBook | Geography: Global | *As of March 31, 2020



SUPPLEMENTAL MATERIALS






Additional VC data

Figure 37.
Foodtech VC deal activity by stage



Source: PitchBook | Geography: Global | *As of March 31, 2020

Figure 38. NOTABLE FOODTECH VC DEALS

<div></div> <div>November 13, 2019 \$700M Series G Lead investor(s): Sands Capital Ventures, Darsana Capital Partners</div>	<div></div> <div>October 29, 2019 \$140M Series C Lead investor(s): Temasek Holdings</div>
<div></div> <div>October 28, 2019 \$33.3M Series A Lead investor(s): Bessemer Venture Partners</div>	<div></div> <div>November 25, 2019 \$23.9M Series A Lead investor(s): V2 Food</div>
<div></div> <div>November 18, 2019 \$16.1M Early-stage VC Lead investor(s): Undisclosed</div>	<div></div> <div>October 17, 2019 \$12M Series B Investors: The Ingenious Group</div>

Source: PitchBook | Geography: Global | *As of March 31, 2020

About PitchBook Emerging Tech Research

Independent, objective and timely market intel

As the private markets continue to grow in complexity and competition, it's essential for investors to understand the industries, sectors and companies driving the asset class.

Our Emerging Tech Research provides detailed analysis of nascent tech sectors so you can better navigate the changing markets you operate in—and pursue new opportunities with confidence.

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