anthemis

# **Embedded Finance**

The Future of the Economy

November 2019



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### **Overview**

Financial services is the nervous system of our economy; a critical system that needs to operate efficiently and equitably for our society to function. The legacy 20th century business models in finance have become increasingly obsolete and most have not adapted to the fundamental paradigm shift — technological, institutional and societal — ushered in by our continuing transition from an Industrial Age to an emerging Information Age. It is essential that these business models be transformed in order to serve the needs of 21st century economies. There is an enormous, multi-decade opportunity to reimagine and rebuild financial services. We can create a system that is more efficient, more equitable and more resilient — and, therefore, better able to adapt to an ever-changing economy and society.

At Anthemis we see this future state of financial services as embedded, augmented and ubiquitous. Rather than finance being discrete, we see it becoming an intimate part of the products and services that drive our economies — an often invisible but critical societal infrastructure, similar to today's communications or energy infrastructures. We imagine a world where finance is embedded deep inside the workings of our businesses and economies, powering the lives and progress of citizens and businesses rather than being a service consumed independently.

Instead of financial services being yet another sector that becomes internet-enabled, it will allow all sectors to become "financeenabled." The result is not just finance on the internet, but rather the "Internet of Finance."

### Background

Broken down to its most fundamental components, financial services has three core functions:

- **Transfer/store of value in space** for example, payments/banking
- **Transfer/store of value in time** for example, financing/investments
- Managing the "entropy" of value for example, insurance.

Historically, a vast number of financial products, services and institutions evolved (such as banks, insurers, asset managers, payment networks and more) to deliver these financial functions to our society. The form in which these products and services were packaged, and the business models of the financial institutions that offered them, were defined by what was possible — technologically and institutionally — at the time they were invented. Because of the systemic economic and societal importance of finance, these products, services and business models were highly regulated, which helped create a certain inertia with respect to change.

However, the technological and institutional changes ushered in over past decades have created the conditions for a fundamental rethinking of how and where the core functions of finance are delivered. Rather than a series of destinations, such as banks — or even a digital "version" of them — the future of financial services is one in which its core, systemic functionality is deeply embedded in our lives and businesses.

This will ultimately change the nature of the way the economy operates, just as the internet has redefined the way we communicate. In this context, the term "embedded finance" refers to the entire range of financial services as each one in the range becomes a capability provided over interconnected networks, much as communications and media are now accessed through the internet. Technological and institutional changes have created the conditions for a fundamental rethinking of how and where the core functions of finance are delivered. This financial services ecosystem — comprising people, businesses, regulators and capital — can now start thinking of finance as a true platform upon which products and services of all types can be built and can flourish. In the first instance, businesses are now able to marshal the power of a bank, a payments provider or an insurance company — and often a combination of all three — to integrate this functionality into their offerings, often imperceptibly. In many cases, they can create entirely new and better value propositions.

Many businesses already have an embedded finance layer — whether it is in the form of a powerful payments backbone or a sensor calculating risk in real time — that customers and, indeed, even investors may have never before considered. For example, users of ridesharing services such as Uber and Lyft can with one click both engage a driver and pay instantly at a journey's conclusion. As finance embeds itself further into the business environment, new opportunities will be revealed to invest capital creatively and nurture innovation.

Most exciting is the way this evolution facilitates the move to a model of financial services that is not zero-sum, in which successful financial products, services and business models create value both for their providers and their customers. If this extraordinary potential is to be fully realized, it will be equally important for regulation and market structures to evolve and adapt to support this new paradigm and safeguard it against predatory actors and tactics.

### How Embedded Finance Works

The core functions of today's financial services ecosystem transactions, financing and risk management — comprise the foundations upon which all business is built. In order to succeed, a business, regardless of sector, must integrate at least one and potentially all three of these components — for example, most companies need to manage their risk of operating with their need to provide a frictionless customer experience. This idea applies both to non-financial services businesses that have financial services technology embedded within them, as well as financial services businesses that can embed their technology into other businesses, in any sector.

# The Role of Capital in Embedded Finance

Just as merchant banks evolved at the turn of the 20th century to offer different financing options to an increasing number and variety of new businesses, so too are we witnessing the beginnings of a shift in the business models of capital allocation and its broader impact on the digital economy's 21st century industries.

The existing industry paradigm optimized for the Industrial economy — consisting of venture capital, private equity, public markets, equity funds, credit funds, hedge funds, banks and the like — will likely evolve and realign to better serve the needs and opportunities presented by the Information economy. New models will emerge. Some will be stage agnostic, some sector agnostic, others capital structure agnostic; all will likely have a value proposition that speaks to a specific need in the market for capital and that leverages a specific set of expertise and source of competitive advantage. As the global context evolves to one in which finance is embedded, augmented and ubiquitous, as part of the same extended system, the business models of investment and capital allocation, in particular, are unlikely to remain untouched.

Today, there are two ways in which to invest in embedded finance: the first is by directing capital to the financial services companies that have components that embed into non-financial services companies. The other is by investing in non-financial services companies that have value propositions that are significantly enhanced or even transformed through the associated financial products and services embedded within. Among the most significant early areas of opportunity for embedded finance are health and wellness, media, mobility, energy, education, construction and real estate, urban planning, and trade and logistics.

Organizations that will succeed in this new paradigm are those that embrace and understand their position at the heart of a network that governs flows of capital. They lead with a networked philosophy that reflects the nature of Information Age organizations, beginning with the understanding that diverse networks are more resilient and better able to adapt to change. Diversity is paramount in terms of both organizational structure and composition: this is true for the wide ecosystem as well as the investment team itself, which serves as its nerve center. Also essential is a deep knowledge of, Many businesses already have an embedded finance layer that customers and, indeed, even investors may have never before considered. and experience in, the complexities of financial services, particularly as they are situated in non-financial services products and services. Integration does not mean simplification, and the business of finance will continue to require an understanding of a complex regulatory environment and an ability to work with large balance sheets and fragmented marketplaces.

In order to enable this transition, an organization must remain connected and attuned to the interests of the entire network, including incumbent financial services players, entrepreneurs, regulators, governments and academics. This includes people and organizations from outside financial services, as the deeper layer of finance reveals adjacencies with virtually every other industry.

### Areas of Opportunity for Embedded Finance

#### **Health and Wellness**

The healthcare and financial services sectors have long been intertwined. Historically, poor physical or mental health was a personal burden as well as a financial one — either directly, because of the high price of many medical bills or, indirectly, because chronic health conditions can reduce an individual's ability to work and to earn. Healthcare expenditures are also an immense financial burden for employers, governments and society as a whole, with some reports indicating that global spending is increasing at an annual rate of 5.4 percent through 2022, at which point it will exceed \$10 trillion.<sup>1</sup>

Whether publicly provided or privately sourced, health insurance can be an important safety net for people who would, without it, be forced to cover more costs out-of-pocket or, even worse, risk financial ruin in order to survive. And yet fundamental, structural flaws in the system keep people under- and uninsured. Healthtech can help insurers better understand risk, evaluate it more efficiently, and help manage it more intelligently.

# \$10,586

The average cost, per person, of healthcare in the US, the highest in the world.

Source: Organization for Economic Cooperation and Development<sup>2</sup> While health insurance traditionally has focused on assessing the risk of ill health and setting a price for it, advanced data science and artificial intelligence now make possible a leap from diagnosis to prognosis. For example, Patch'd, an Anthemis portfolio company, aims to detect the hidden warning signs of sepsis before it takes hold. Now that we can (or soon will be able to) make the leap from identifying a disease after the patient has been diagnosed to predicting when symptoms will arise, the opportunity window opens to stop it from occurring in the first place — improving people's health and saving them money.

The evolution in the use of data and the application of technology also can reveal the ways in which the behaviors of individuals connect with their risk of illness, which can lead to smarter and more efficient management of chronic diseases. Patients who are better supported are less likely to visit emergency rooms, to relapse, and, potentially, to be as dependent on drugs — all of which can reduce the number and cost of insurance claims. Omada Health, an Anthemis portfolio company, and Livongo are two examples of companies working with people at risk of diabetes and other chronic health conditions.

We are only just beginning to see how insurance can become more affordable and elective as technology enables people to become "better risks" — a win-win-win for people's health, their finances and society at large. The implications are clearly paradigm-shifting: for the first time ever, healthcare embeds itself in finance, rather than only the other way around.

#### Media

One of the first sectors to be transformed by the digital revolution, media is proving to be fertile ground for scalable embedded finance applications, in particular as media creation and consumption has become so integral to our daily lives. Platforms such as Kickstarter, marketplaces such as Stubhub and services such as Spotify are early adopters that used media as a jumping-off point to establish product–market fit.

Content creation, once limited to a small number of incumbent players, has become democratized and decentralized. Established platforms such as YouTube and Instagram are now joined by Twitch, which focuses on real-time, shared experience, and TikTok, the first non-US social media platform to go global; they are continually

## \$43.4 billion

2018 global video game revenue.

Source: Entertainment Software Association<sup>3</sup>

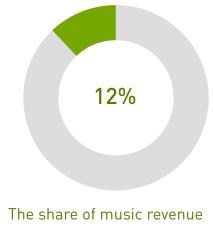
creating new formats and asset classes. Today an estimated 22 percent of American male millennials watch competitive video gaming online, putting eSports virtually equal to baseball and ice hockey in terms of viewership.<sup>4</sup> Battlefy, an Archer Gray portfolio company, has captured this shift through its open platform, where content creators, publishers and brands create eSports events and competitions from amateur to professional levels.

As content creation continues to expand, the media industry must examine new-found friction in legacy business models and gaps in infrastructure, especially in the financial services layer of media. But this evolution also unlocks new forms of media and digital assets, encouraging the emergence of untapped models for managing, securitizing and monetizing these alternative assets.

From a consumer standpoint, one consistent challenge has been payment transaction fees. China's ability to remove that friction has led to an internet media model that is not dependent on advertising and does not require subscriptions. This is a fundamentally new economic model for internet media, entirely dependent on financial innovation and embedded finance in particular. It is likely to spread outside China.

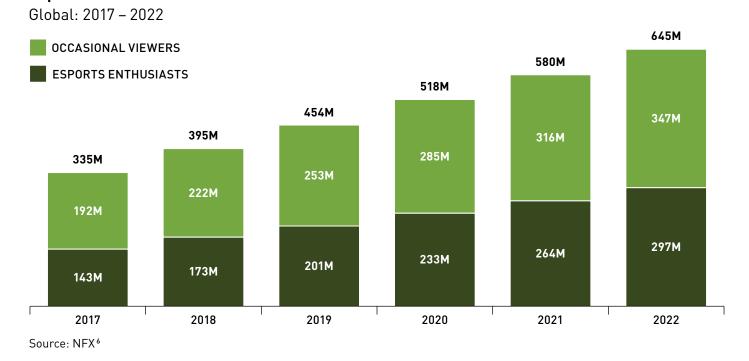
These changes also raise questions for contributors to this new economy. From casual gamers buying virtual swords to "casters"

eSports Audience Growth



### received by artists.

Source: Citi Research⁵



like Fortnite legend Ninja, from moms on Instagram to influencers building massive direct-to-consumer brands to Tencent's AI-enabled in-video product placement, content creators are encountering unique financial services challenges that did not exist five years ago. They all require innovative tools so that they can receive payment, manage their income, safeguard intellectual property and mitigate reputational risk.<sup>7</sup>

#### Education

The global education system is profoundly affected by the flow of capital. In the United States (US) alone, education is the second largest source of consumer debt after mortgages, with approximately 43 million borrowers<sup>8</sup> and a total outstanding federal student loan debt of about \$1.5 trillion.<sup>9</sup> But fees are high around the world, particularly for students who cross borders to study—a situation made even more challenging as uncertainty reigns in the UK, due to Brexit. The education sector is ripe for innovation, from the offerings of providers to the investment strategies of potential—and even past—students.

There are several ways in which debt and equity financing, for both education and internships, can address current needs and broaden access in the future. One powerful example is the growth of income share agreements (ISAs), through which a student who borrows for school commits to paying back a percentage of their income for a fixed number of years after graduation. (Similar income-based repayment systems already exist for UK government student loans.) One example of embedded finance in education is Edly, a seed-stage ISA marketplace that connects accredited private investors with institutions such as Purdue University, which already offers students an ISA option.

There is a range of opportunities to foster this evolution, from investing in innovative education platforms themselves, to partnering with them on debt financing, to empowering the technology companies working with them — or with existing education providers — on solutions.

## \$1.5 trillion

Total outstanding federal student loan debt in the US.

Source: New York Federal Reserve<sup>9</sup>

### Agriculture

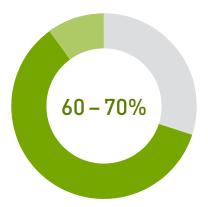
During the next 50 years, population growth and changing diets will increase demand for crops — doubling the world's current output.<sup>10</sup> And yet we are ever more aware of the environmental impact of producing and consuming food — from freshwater use to greenhouse gas emissions to agriculture's contribution to the erosion of biodiversity. There is growing demand for innovation in the food system, in order for the right yield to be produced, with the smallest environmental footprint.

One powerful example of what is possible can be found in the Netherlands, which, after the US, is one of the world's leading exporters of food, as measured by value.<sup>11</sup> The Dutch system of precision farming — essentially, technology-enabled agriculture — relies on data and innovative practices to optimize growing conditions. There are opportunities to build on these ideas around the world: two examples include satellite technology that can monitor soil quality, and sensors that can help farmers apply the smallest amount of harmful chemicals, thereby shifting market focus away from pesticides. Sophisticated risk management platforms such as Stable, an Anthemis portfolio company, can calculate risk across a vast collection of commodities in order to secure the livelihoods of farmers weathering both climate change and wide swings in price.

### Mobility

Mobility services are increasingly reliant on embedded finance to reach customers, connect them and protect them; manufacturers and insurers also need that level of innovation to remain relevant in a dramatically shifting market.

With the electric vehicle revolution underway, our financial services system must evolve in order to support an entirely new model of movement and the energy distribution required to power it. By 2025, electric and electric hybrid vehicles will, together, account for an estimated 30 percent of all vehicle sales.<sup>12</sup> This shift will create even more significant changes in the world economy, as e-mobility spurs demand for updated electricity grid infrastructure and puts increased pressure on auto part suppliers and service providers to adapt to a product with increasingly fewer moving parts.



The amount that agricultural production will have to increase by 2050 in order to meet the demand of the world's projected nine billion inhabitants.

Source: Michigan State University<sup>13</sup>

### 3.5 million

The number of estimated battery electric vehicles by 2020.

## 4.8 million

The number of estimated battery electric vehicles by 2025.

Source: Federation of American Scientists <sup>14</sup>

As the world awaits "Level 5" autonomy, in which a driverless car can operate on any road in any condition that a human might navigate, there are opportunities today to invest in its future, through the development of self-drive lanes, for example, or roads for autonomous, fixed-route buses.

Some of the most significant ways that finance has embedded into mobility is through risk analysis. Two Anthemis portfolio companies deploy artificial intelligence (AI) to insure any product for which risk is shaped by the context of its journey. One, Trov, has an on-demand insurance engine that integrates with vehicles; today, through its partnership with Waymo, passengers of Waymo's autonomous fleets are automatically insured. The other, Flock, pioneered the first payper-flight drone insurance product, which enables insurers to create real-time risk scores, fast quotes and even policies that customers can purchase in the app.

### Energy

Innovative financial services components are an intrinsic part of the evolving energy marketplace, improving access, driving better pricing and alleviating risk. Nowhere is that more apparent than in the growth of the renewable energy sector. Clean energy investment is expected to total \$2.6 trillion in the years from 2010 to the end of this decade, according to a recent analysis.<sup>15</sup> By 2050, renewables are projected to power nearly half of the world's energy, according to the U.S. Energy Information Administration.<sup>16</sup>

Renewable energy has evolved along with AI, data storage and computing power. By embedding financial services into energy products, businesses can adjust to meet new requirements and risks across a wider spectrum of needs. We are seeing this happen at a micro-level through rental markets for solar technology in the developing world. On the other side of the spectrum is kWh Analytics, an Anthemis portfolio company that issues insurance contracts on solar energy assets by leveraging data from solar farms to guarantee a minimum level of energy output.

# \$1 trillion

The amount the global value of the mobility ecosystem is expected to increase by 2030.

Source: KPMG<sup>17</sup>

# 1.8 million barrels

The daily demand for oil that is projected to be displaced by 2035, with increased adoption of electric cars.

Source: Institute for Energy Research <sup>18</sup>

### **Construction and Real Estate**

In addition to broader issues of urban planning and infrastructure outlined below, there are many areas of potential innovation in the built environment at the level of individual buildings. Embedded finance can play a role in design and construction, maintenance and insurance, and buying and selling.

Nearly a century after prefabrication and modularity were first developed, they are finally becoming a reality for domestic architecture, largely due to services that can handle and coordinate more sophisticated supply chains. Advanced remote imaging using drones allows for accurate monitoring of the build process, which is notoriously prone to legal issues of delay; fixed contingency costs can be priced and updated far more accurately.

Two Anthemis portfolio companies offer novel solutions for the maintenance and insurance of property. Insurdata has much more accurate location data than what is currently available, including elevation and even building outlines, which allow for insurers to price flood risk more accurately. For flooding caused by internal leaks rather than the weather, Flo has developed a leak-monitoring device that uses sophisticated, AI-driven technology to analyze water usage rather than moisture damage. This can account for tiny "drip" leaks that can result in significant insurance damage normally invisible until it is too late.

### **Urban Planning**

The ideal city of the future will reflect the qualities we value most in the design of technology: it will be clean, green and bolstered by smart infrastructure that is as complex as it is undetectable. The shift away from the Industrial Age clutter of cars, wires and telephone boxes will become ever more imperative as cities become increasingly crowded: by 2050, the United Nations estimates that 68 percent of the world's inhabitants will be urban dwellers — up from 54 percent in 2014 and just 30 percent in 1950.<sup>19</sup>

This opens up many possibilities for innovation, from smart parking and traffic-management technologies, to the use of sensors and AI for public safety, to energy and water grid management. Changes in

# \$40 billion

The damage caused by floods worldwide each year.

Source: Organization for Economic Cooperation and Development<sup>20</sup>



The improvement to key quality-of-life indicators after adding digital intelligence to existing urban systems.

Source: McKinsey<sup>21</sup>

housing, transportation, healthcare and social services are just a few of those possibilities that will be essential as a growing majority of urban dwellers are of retirement age or older.

#### **Trade and Logistics**

Trade has changed more in the last 50 years than at any time in the last 500, due to the expansion of the internet and the resurgence of China and India. Though physical trade and the trade of information have decoupled, both now flow over modular networks — International Standards Organization containers and internet packets, respectively. Both are experiencing enormous increases in investment in new infrastructure and institutions. Finance has been at the core of this revolution: The massive scale of the dominant internet platforms created demand-side advantage, which led to the buildout of traditional supply-side advantage through IT infrastructure and modern financial "rails," with far less friction and lower transaction costs.

The most ambitious infrastructure program in history, China's Belt and Road Initiative (BRI) aims to create a 21st century Silk Road, connecting Asia to Europe, by 2049. It has a \$900 billion direct budget, backed up with up to \$8 trillion in loans to more than 60 countries, with \$1 trillion already allocated.<sup>22</sup> On the internet, Alibaba's Electronic World Trade Platform (eWTP) is designed to "complement" the World Trade Organization (WTO), helping countries reduce trade barriers for e-commerce trade.

Alibaba, along with Amazon, are the most important companies in the space. Amazon leads as a reseller that operates its own logistics and distribution. It is on track to have more than 70 aircraft in its fleet by 2021.<sup>23</sup> Meanwhile, Alibaba has pledged \$15 billion dollars to be invested in its global logistics network.<sup>24</sup> It is possible the two will converge in competition over logistics.

Newer entrants include Flexport, which aims to digitize international shipping as part of the \$1.1 trillion international freight forwarding market,<sup>25</sup> and Shopify, which, with over a billion dollars in annual revenue, is North America's third-largest online retailer by volume of goods sold, after Amazon and eBay.<sup>26</sup>

Going forward, embedded finance opportunities will revolve around technology for integrated supply chains and distributed databases,

# \$519 billion

Alipay's total payment volume at the time of Alibaba's initial public offering.

Source: US Securities and Exchange Commission<sup>27</sup>

where the low-hanging fruit may be visibility, rather than automation — and which need not rely on decentralized technologies such as blockchain. Inventory control systems, which have evolved from enterprise resource planning (ERP) and supply-chain management through to intercompany ERP, have now matured. They are combining with financial services such as supply-chain financing to create incentives for shared ledgers that go beyond core banking and software as a service (SaaS) accounting systems.

Although barriers to the trade of ideas are at a historic low, this shift comes at a time of growing backlash in the US, which, in 2017, pulled out of the Trans-Pacific Partnership and the Paris climate accord. Chinese state media has reported that Alibaba's plans to create a million jobs in the US have been put on ice due to trade tensions.<sup>28</sup>

# \$1.64 trillion

Amount US businesses spent on logistics in 2018

Source: Council of Supply Chain Management Professionals<sup>29</sup>

### Conclusion

Finance has always been "systemically critical" infrastructure for business and trade. Before the internet replaced physical interactions with virtual ones, providers and regulators of financial services projected trustworthiness and security through architecture and brand. Back then, stone column-studded facades and, later, sleek glass and steel skyscrapers assured customers that their money would be safe and strategically invested.

The financial near-meltdown of 2008 and other recent instabilities in the system have manifestly exposed the business model "marble halls" of 20th century finance to be at the end of their useful life; over the coming years and decades, they will be replaced. As a broader and more connected way of thinking emerges, resilience and adaptability will become paramount, and trust will be conveyed through the reliability and efficient design of electronic financial services as an embedded and interconnected network.

The future of financial services will be impacted deeply by the emergence of embedded finance: finance that promises to be more internet-like, more interconnected and more customizable, with novel components that can be inserted into individual businesses in different sectors. The evolution of each of these components, and the interactions among them, will reveal even more adjacencies between financial services and virtually every other industry. We are at a key inflection point in which fundamentally new business models will arise and flourish. These new models will both unlock and create enormous value within and among our economies and societies and, along the way, create many new and successful businesses.

### Endnotes

- 1 Deloitte. (2019, January). "2019 Global Health Care Outlook."
- Organization for Economic Cooperation and Development. (2019). Health Spending/Total, US dollars/capita, 2014 – 2018.
- 3 Entertainment Software Association. (2019, January 22). "U.S. Video Game Sales Reach Record-Breaking \$43.4 Billion in 2018."
- 4 NewZoo. (2016, October). "Why Sports and Brands Want to be in Esports."
- 5 Citi GPS. (2018, August). "Putting the Band Back Together: Remastering the World of Music."
- 6 Levy-Weiss, G. (2019, October 15). "What VCs Don't See: Why We're Bullish on Gaming Startups." NFX.
- 7 Hook, L. (2018, October 8). "Are 'influencers' the untapped insurance market?" Insurance Business.
- 8 Haughwout, A., Lee, D., Scally, J., and van der Klaauw, W. (2019 October 9). "Who Borrows for College — and Who Repays?" Federal Reserve Bank of New York Liberty Street Economics.
- 9 Federal Reserve Bank of New York. (2019, August). "Quarterly Report on Household Debt and Credit."
- 10 Foley, J. (2014, May). "A Five Step Plan to Feed the World." National Geographic Magazine.
- 11 Government of the Netherlands. (2017, January 20). "Agri & food exports achieve record high in 2016."
- 12 J.P. Morgan. (2018, October 10). "Driving into 2025: The Future of Electric Vehicles."
- Silva, G. (2018, December 3). "Feeding the World in 2050 and Beyond — Part 1: Productivity Challenges." Michigan State University Extension.
- 14 Canis, B. (2019, February 8). "Electrification May Disrupt the Automotive Supply Chain." U.S. Congressional Research Service.
- 15 McCrone, A., Moslener, U., Grüning, C., d'Estais, F. (2019, September). "Global Trends in Renewable Energy Investment 2019." Frankfurt School-UNEP Collaborating Centre for Climate & Sustainable Energy Finance.

- 16 Bowman, M. (2019, October 2). "EIA projects that renewables will provide nearly half of the world electricity by 2050." U.S. Energy Information Administration.
- 17 KPMG. (2019, February). "Mobility 2030: Transforming the Mobility Landscape."
- 18 Institute for Energy Research. (2018, January 3). "Study: Electric Vehicle Charging Could Present Grid Challenges."
- 19 United Nations Department of Economic and Social Affairs.
  (2018, May 16). "68% of the world population projected to live in urban areas by 2050, says UN."
- Organization for Economic Cooperation and Development.
  (2016). "Financial Management of Flood Risk,"
  OECD Publishing.
- 21 McKinsey & Company. (2018, June). "Smart cities: Digital solutions for a more livable future."
- 22 Ruwitch, J. and Blanchard, B. (2017, April 26). "Exclusive — China seeks to cement globalisation credentials at Silk Road summit." Reuters.
- 23 Humphries, M. (2019, June 19). "Amazon Air Adds Another 15 Cargo Aircraft." PC Magazine.
- 24 Wu, K. and Cadell, C. (2017, September 26). "Alibaba takes control of logistics business, pledges \$15 billion to expand network." Reuters.
- 25 Armstrong & Associates. (2017, October 5). "E-Commerce and Continued Outsourcing is Fueling Global Third-Party Logistics Market Growth Driving 3PL Revenues to Over \$1.1 Trillion by 2022."
- 26 Kim, E. (2019, September 9). "Shopify will soon trail only Amazon for US e-commerce, and the stock is soaring." CNBC.
- 27 US Securities and Exchange Commission. (2014, May6). "Form F-1 Registration Statement: Alibaba Group Holding Limited."
- 28 Xinhuanet. (2018, September 19). "Xinhua News Agency Interview with Ma Yun."
- 29 A.T. Kearney. (2019, June). "2019 State of Logistics Report."



### anthemis

Anthemis cultivates change in financial services by investing in, growing and sustaining businesses committed to improving the world.

We were founded on three guiding principles — authentic collaboration, virtuous cycle outcomes, and diversity and inclusivity — and our deep understanding of markets and models, passion for emerging technology and values inspire everything we do. By creating fertile ground for a diverse group of startups, investors, entrepreneurs, institutions, academics and visionaries to converge, we believe we can solve the financial services world's most pressing challenges faster, better and for the benefit of all.

### For the latest on the Anthemis ecosystem, visit: anthemis.com/news-and-insights

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