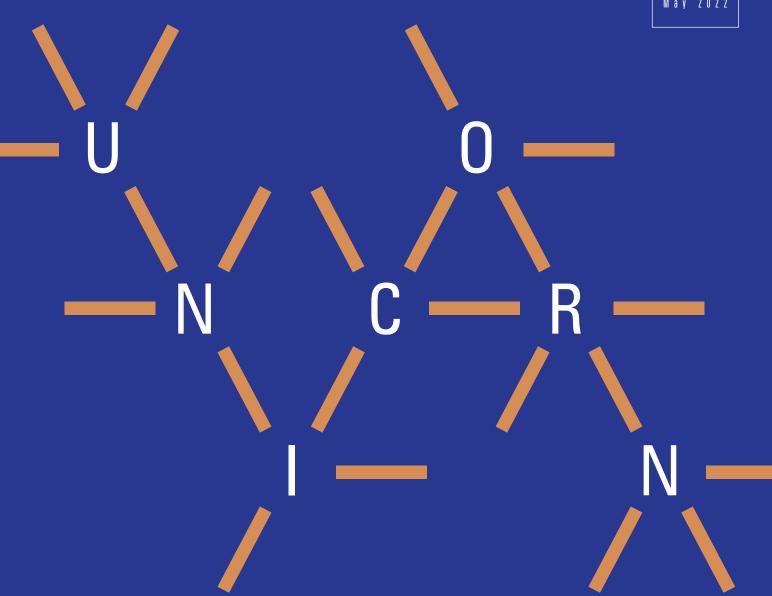
vol.07 Published: May 2022



# Market Watch

Korea Venture Investment Corporation Semi-Annual Journal





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KVIC MarketWatch has been prepared by Korea Venture Investment Corp. (KVIC).

It is a periodical publication intended to spur investments in SMEs and startups, and bring about a more sophisticated industrial structure by reporting the performance of Korea Fund of Funds and other funds managed by KVIC.

The publication ultimately aims to serve public interest and support balanced economic growth.

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SEMI-ANNUAL JOURNAL

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# K-Unicorns (1) ZIGBANG (2) NEXT UNICORNS

45



# Fund Manager: Korea Venture Investment Corp.

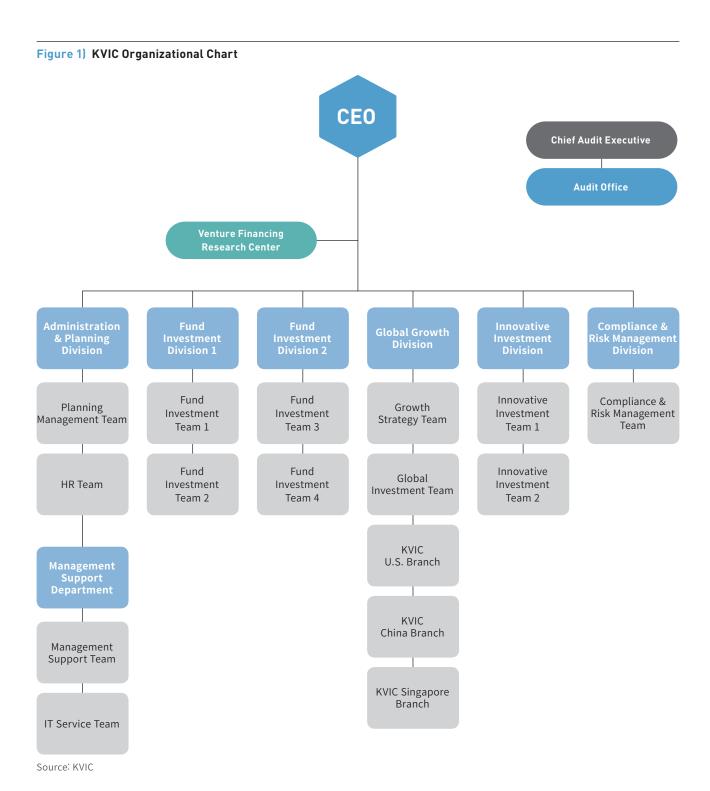
Korea Venture Investment Corp. (KVIC) was established with the aim of stimulating investment for the growth and development of small and medium-sized enterprises (SMEs) and startups. KVIC serves as the general partner (GP) of government-backed funds of funds and direct co-investment funds pursuant to the Act on Special Measures for the Promotion of Venture Businesses.

#### A Glimpse into KVIC History & Milestones

2022	January	Korea Fund of Funds (KFoF) has secured a cumulative total of USD 6,720 million (KRW 8 trillion) in capital commitments.  KVIC established its Venture Financing Research Center.
2021	November	A venture capital (VC) fund with approximately USD 26 million (KRW 30.4 billion) in capital commitments was launched for regional development in Busan under the Korean New Deal.
	October	A VC fund with nearly USD 26 million (KRW 30.5 billion) in commitments (i.e., Water Sector Fund) was created for regional development in the Chungcheong region under the Korean New Deal.
	June	Job Creation Scale-up Fund 2 was set up with USD 17 million (KRW 20.5 billion) in capital commitments.
	January	KFoF reached a cumulative total of USD 5,580 million (KRW 7 trillion) in capital commitments.
	August	KVIC became a statutory body under the Venture Investment Promotion Act.
2020	February	The basis of KVIC establishment was enacted on February 11, 2020 and was called the Venture Investment Promotion Act.
	January	KFoF achieved USD 4,200 million (KRW 5 trillion) in cumulative total commitments.
2010	September	The Ministry of Land, Infrastructure and Transport became a limited partner (LP) in KFoF.
2019	January	The Ministry of Oceans and Fisheries became an LP in KFoF.
	December	KVIC introduced new base bylaws for investee funds.
2010	August	Job Creation Scale-up Fund was formed with USD 43 million (KRW 50.6 billion) in capital commitments.
2018	August	KEB Hana-KVIC Fund was launched with USD 92 million (KRW 110 billion) in capital commitments.
	June	KFoF raised USD 3,360 million (KRW 4 trillion) in aggregate commitments on a cumulative basis.
	August	KFoF's cumulative commitments totaled USD 2,520 million (KRW 3 trillion).
2017	Мау	The Ministry of Education participated as an LP in KFoF.
	April	The Ministry of Environment became an LP in KFoF.
2016	October	KVIC launched Venture Investment Comprehensive System (VICS).
2016	June	Cumulative commitments to Foreign VC Investment Fund reached USD 840 million (KRW 1 trillion).
	August	KVIC opened its Korea Venture Investment Center in Singapore (KVIC Singapore Branch).
2015	May	KFoF's cumulative commitments hit USD 1,680 million (KRW 2 trillion).
	January	Korea Sports Promotion Foundation (KSPO) participated as an LP in KFoF.
2014	June	KVIC opened its Korea Venture Investment Center in China (KVIC China Branch).
2013	August	The Ministry of Health and Welfare became an LP in KFoF.
2013	August	KVIC launched its Korea Venture Investment Center in the United States (KVIC U.S. Branch).
2012	June	SME M&A Matching Fund was formed with nearly USD 26 million (KRW 30.5 million) in capital commitments.
2011	December	Korea Angel Matching Fund No. 1 was set up with USD 8 million (KRW 10 billion) in capital commitments.
	May	The Ministry of Employment and Labor participated as an LP in KFoF.
2010	August	The Korean Film Council joined as an LP in KFoF.
	June	The Korea Communications Commission became an LP in KFoF.
2009	September	KFoF's cumulative commitments reached USD 840 million (KRW 1 trillion).
2006	June	The Ministry of Culture, Sports and Tourism participated as an LP in KFoF.
	Мау	The Korean Intellectual Property Office (KIPO) joined as an LP in KFoF.
2005	June	KFoF, a government VC program, was launched and KVIC was formed for the purpose of managing KFoF.
	00	KVIC was designated as the GP of KFoF.
2004	December	The legal basis of KFoF formation and operation was laid down by amendments to the Act on Special Measures for the Promotion of Venture Businesses.
2004		The government announced measures to vitalize startups.
	July	The government unveiled its comprehensive initiative aimed at enhancing SME competitiveness.

# **Organizational Structure**

KVIC has 6 divisions, 1 department, 1 office, 1 center, 13 teams and 3 offshore branches (as of January 1, 2022).



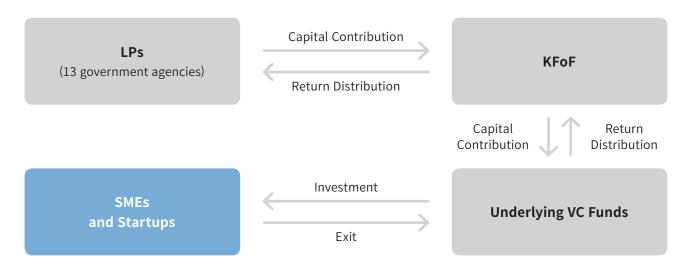
# Korea Fund of Funds

Korea Fund of Funds (KFoF) is a government-backed fund of funds that invests in venture capital (VC) funds managed by private VC firms. Investors or limited partners (LPs) in KFoF are mainly government agencies that have committed capital to the fund for venture investments catering to their policy needs. The underlying VC funds invest in SMEs and venture companies, playing an important part in creating a venture ecosystem.

#### **Fund Overview**

Date of Formation	July 15, 2005
Fund Size	USD 6,113 million (KRW 7,277.5 billion) (as of December 31, 2021)
Size of Underlying Funds	USD 27,665 million (KRW 32,935.3 billion) (cumulative, as of December 31, 2021)
Fund Term	30 years (2005-2035)
LPs (13 government agencies)	The Ministry of SMEs and Startups; Korea SMEs and Startups Agency; Ministry of Culture, Sports and Tourism; Korean Intellectual Property Office; Korean Film Council; Ministry of Science and ICT; Ministry of Employment and Labor; Ministry of Health and Welfare; Korea Sports Promotion Foundation; Ministry of Environment; Ministry of Education; Ministry of Land, Infrastructure and Transport; Ministry of Oceans and Fisheries
GP	KVIC

#### **Fund Structure**



# Other Funds of Funds

# **Foreign VC Investment Fund**

Foreign VC Investment Fund (FVCIF) was first set up to invest in offshore VC funds managed by non-Korean VCs under the Measures to Develop a Virtuous Cycle in the Venture–Startup Funding Ecosystem, unveiled by the government on May 15, 2013. Its mandate is to help local SMEs and startups attract global investors and expand overseas.

	FVCIF	FVCIF II
Date of Formation	October 4, 2013	July 15, 2016
Fund Size	USD 114 million (KRW 135.4 billion) (as of December 31, 2021)	USD 245 million (KRW 291.9 billion) (as of December 31, 2021)
Size of Underlying Funds	USD 3,739 million (KRW 4,451.3 billion) (cumulative, as of December 31, 2021)	
Fund Term	21 years (2013-2034)	19 years (2016-2035)
LPs	KFoF/KVIC	KFoF/KVIC
GP	KVIC	

# **Angel Fund of Funds**

Established in 2015, this fund of funds invests solely in angel funds that concentrate on startup or early-stage businesses.

	Fund Profile
Date of Formation	November 18, 2015
Fund Size	USD 62 million (KRW 74 billion) (as of December 31, 2021)
Size of Underlying Funds	USD 96 million (KRW 114.7 billion) (cumulative, as of December 31, 2021)
Fund Term	20 Years (2015-2035)
LPs	KFoF/KVIC
GP	KVIC

#### **KEB Hana-KVIC Fund**

This fund launched its operations in 2018, primarily financed by KEB Hana Bank, with the aim of creating a venture ecosystem and nurturing unicorns. It makes indirect investments in SMEs and startups through its underlying funds.

	Fund Profile
Date of Formation	August 21, 2018
Fund Size	USD 92 million (KRW 110 billion) (as of December 31, 2021)
Size of Underlying Funds	USD 624 million (KRW 742.9 billion) (cumulative, as of December 31, 2021)
Fund Term	10 years (2018-2028)
LPs	KEB Hana Bank/KFoF/KVIC
GP	KVIC

#### **KEPCO Fund**

KEPCO Fund is intended to foster the growth of not only the power and energy sectors but also ICT SMEs and startups related to the sectors, and to identify and nurture SMEs and startups in Gwangju and South Jeolla Province (Jeonnam region) in which the Energy Valley is located. The primary LP or investor in the Fund is state-run utility Korea Electric Power Corporation (KEPCO).

	Fund Profile
Date of Formation	August 19, 2015
Fund Size	USD 44 million (KRW 52.5 billion) (as of December 31, 2021)
Size of Underlying Funds	USD 74 million (KRW 88 billion) (cumulative, as of December 31, 2021)
Fund Term	10 years (2015-2025)
LPs	KEPCO/KFoF/KVIC
GP	KVIC

#### **Smart Korea Fund**

This fund of funds aims to invest in startups and venture businesses in areas leading the transition towards a digital economy under the Korean New Deal announced on July 14, 2020.

	Fund Profile
Date of Formation	August 14, 2020
Fund Size	USD 76 million (KRW 91 billion) (as of December 31, 2021)
Fund Term	12 years (2020-2032)
LPs	KBIZ Yellow Umbrella Mutual Aid/ Korea Technology Finance Corp. (KOTEC)/Se-Ri Pak/KFoF/KVIC
GP	KVIC

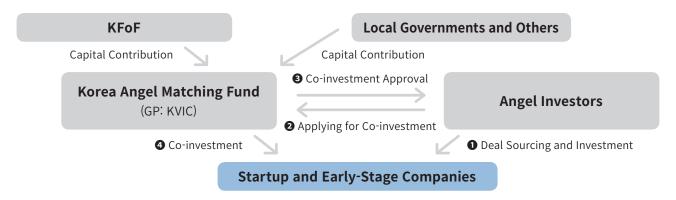
#### Other Funds

Other funds managed by KVIC include the Fund of Funds for Industrial Technology Commercialization with USD 21 million (KRW 25 billion) in assets under management (AUM), and KoFC-KVIC I and II with USD 101 million (KRW 120 billion) and USD 90 million (KRW 107 billion) in AUM, respectively. The job creation funds, KoFC-KVIC I and II, are now being liquidated.

# Co-Investment Funds

# **Korea Angel Matching Fund**

Korea Angel Matching Fund is a public-private co-investment fund that is specially designed to nurture angel investors and angel clubs, thereby laying the foundation for startup creation and helping startup and early-stage companies fill their equity gaps. As of December 2021, there were 16 Korea Angel Matching Funds with collective AUM of USD 161 million (KRW 192 billion).



# **Job Creation Scale-up Fund**

In August 2018, Job Creation Scale-up Fund was first introduced to co-invest alongside institutional investors in SMEs and scale-up companies that are designated as key drivers of job creation.

	Job Creation Scale-up Fund	Job Creation Scale-up Fund 2	
Date of Formation	August 16, 2018	June 25, 2021	
Fund Size	USD 43 million (KRW 50.6 billion) (as of December 31, 2021)	USD 9 million (KRW 10.3 billion) (as of December 31, 2021)	
Fund Term	8 years (2018-2026)	8 years (2021-2029)	
LPs	KFoF/KVIC		
GP	KVIC		
Job Creation Scale-Up Fund (GP: KVIC)  Solution Co-investment Approval  Institutional Investors*			
4 Co-invest	ment	Deal Sourcing and Investment	
SMEs and Scale-ups			

<sup>\*</sup> Institutional investors who are qualified to manage Korea Venture Funds (KVFs), new technology venture investment partnerships and/or private equity funds (PEFs).

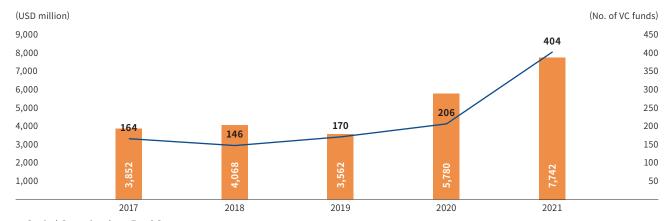


# Venture Capital Funds in Korea

# **Fundraising**

In 2021, Korean venture capital (VC) funds<sup>1)</sup> experienced significant growth in fundraising compared to 2020. As of December 31, 2021, the amount of capital committed to new VC funds hit USD 7,742 million (KRW 9,217.1 billion), a 1.3-fold year-over-year (YoY) increase, and the number of new VC funds stood at 404, a 2-fold YoY rise.





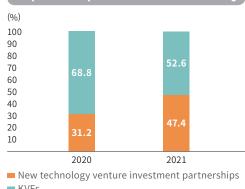
■ Capital Committed **—** Fund Count

Source: Korea Venture Capital Association (KVCA)

#### Main Types of Investment Vehicles in the Korean VC Market

Vehicle	KVF	New Technology Investment Partnership
Applicable Law	Venture Investment Promotion Act	Specialized Credit Finance Business Act
GP	Startup investment company, new technology venture investment company, limited company, limited liability company, etc.	New technology venture investment company
Competent Authority	Ministry of SMEs and Startups (MSS)	Financial Services Commission (FSC)

#### Proportional Split of Korea's VC Fundraising



\* Two separate acts relating to venture investment under the MSS were consolidated into a single act called the Venture Investment Promotion Act that came into effect on August 12, 2020.

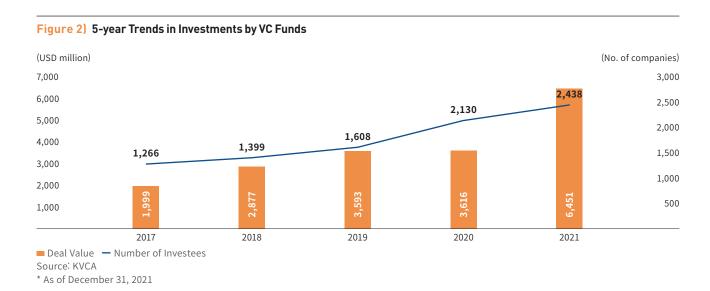
<sup>\*</sup> As of December 31, 2021

<sup>1)</sup> Korea's two major VC investment vehicles are Korea Venture Funds (KVFs) and new technology venture investment partnerships. While the Ministry of SMEs and Startups (MSS) is the competent authority for KVFs, the Financial Services Commission (FSC) is the competent authority for new technology venture investment partnerships. Each of the competent authorities collates and analyzes VC data, and produces VC statistics annually. KVFs as a percentage of total capital committed to VC were 68.8% in 2020 and 52.6% in 2021, exhibiting its vital role in the Korean VC market. For this report being prepared based on VC data from KVCA, therefore, KVFs are defined as VC funds.

# **Investments**

# **Investments by VC Funds**

As of December 31, 2021, Korean VC funds injected USD 6,451 million (KRW 7,680.2 billion) into 2,438 companies, showing a 78.4% increase in deal value from 2020 levels. The number of companies receiving venture funding also climbed by 308 YoY to 2,438. Both deal value and the number of investee or portfolio companies hit record highs in 2021. The average VC investment per company grew by USD 0.9 million (KRW 1.13 billion) YoY to USD 2.6 million (KRW 3.15 billion) as the increase in deal value outpaced the growth in the number of investees.

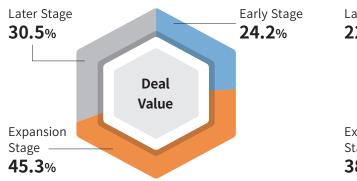


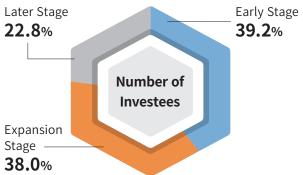
# **Deals by Stage and Industry**

When the total investments made by Korean VC funds as of December 31, 2021 are broken down by stage<sup>21</sup>, companies in their expansion stage (3-7 years in existence) acquired USD 2,924 million (KRW 3,481.4 billion), representing 45.3% of total deal value. Companies in their later stage (above 7 years) raised USD 1,965 million (KRW 2,339 billion), accounting for 30.5% of the total. And companies in their early stage (less than 3 years) snagged USD 1,562 million (KRW 1,859.8 billion), taking up 24.2%. In terms of the number of investees, early-stage, expansion-stage and later-stage companies constituted 39.2%, 38.0%, and 22.8% of overall VC deals, respectively.

<sup>2)</sup> Stages of an investee company are determined based on the duration between the date on which a company is founded and the time capital is invested in the company. This indicates information about what stage an investee company has received VC funding (early stage: less than 3 years/expansion stage: 3-7 years/later stage: more than 7 years).

Figure 3) 2021 Deal Activity by Stage - VC Funds





Source: KVCA

Figure 4) 2021 Deal Activity by Industry - VC Funds



No	Sector	% of Total
1	ICT Services	31.6
2	Biotech/Healthcare	21.8
3	Distribution/Services	18.9
4	Electrics/Machinery/Equipment	6.7
5	Film and TV/Performing Arts/Recording	5.4
6	Other	4.8
7	ICT Manufacturing	4.6
8	Game	3.1
9	Chemicals/Materials	3.0



No	Sector	% of Total
1	ICT Services	32.0
2	Distribution/Services	18.7
3	Biotech/Healthcare	15.9
4	Film and TV/Performing Arts/Recording	7.9
5	Electrics/Machinery/Equipment	7.7
6	Other	6.7
7	ICT Manufacturing	4.2
8	Chemicals/Materials	3.5
9	Game	3.4

Source: KVCA

<sup>\*</sup> As of December 31, 2021

In 2021, ICT services was the industry<sup>3</sup> attracting the largest share of investments from VC funds, totaling USD 2,040 million (KRW 2,428.3 billion) and making up 31.6% of the total deal value. This was followed by biotechnology/healthcare, which received USD 1,409 million (KRW 1,677 billion), 21.8% of the total, and distribution/services, which pulled in USD 1,222 million (KRW 1,454.8 billion), 18.9% of the total. ICT services also contributed to 32% of overall VC deals, followed by distribution/services with 18.7%, and biotechnology/heathcare with 15.9%, when it comes to the number of investees.

Industry	Sub-Industry
ICT Manufacturing	Semiconductor/other electronic components; computer/peripheral equipment; broadcasting and communications equipment; audio and video equipment
ICT Services	Communications; software; information services
Electrics/Machinery/Equipment	Electrical equipment; general purpose machinery; transport equipment/parts; precision instruments
Chemicals/Materials	Chemical materials/products; rubber/plastics; metals; non-metallic minerals
Biotech/Healthcare	Medical devices; medical materials/pharmaceuticals; healthcare facilities/services
Film and TV/Performing Arts/ Recording	Publishing/broadcasting; audiovisual content; performing arts/exhibition/music
Game	Game software; sports/leisure
Distribution/Services	Wholesale and retail trade; transportation; accommodation/food services; education; professional services
Other	Food and beverages; textiles/clothing/leather; wood/paper/printing/furniture; energy/resources; construction; finance; real estate/renting and leasing; other

<sup>3)</sup> The above industry breakdown is based on the Korean Standard Industrial Classification (KSIC) published by Statistics Korea.

# **Exits**

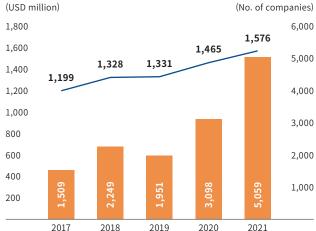
#### **Exits by VC Funds**

2021 saw USD 5,059 million (KRW 6,022.4 billion) of total VC-backed exits. Total exit value includes USD 1,516 million (KRW 1,804.2 billion) in invested capital and USD 3,543 million (KRW 4,218.2 billion) in proceeds, generating a multiple on invested capital (MOIC) of 3.34x. The exit value jumped by 63.3% YoY thanks to astonishing 106.5% YoY growth in exit proceeds despite a mere 9.7% YoY increase in invested capital exited. In the meantime, the number of exited companies grew by 111 YoY to 1,576 in 2021.

#### **Exits by Route**

VC-backed exits in 2021 were made mostly through sales (M&A, secondary sale, etc.) and IPOs. Exits via sales worth USD 2,626 million (KRW 3,126.3 billion) constituted 51.9% of the total exit value, and exits via IPOs worth USD 2,115 million (KRW 2,518 billion) made up 41.8%.

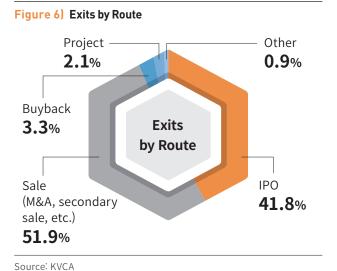




■ Exit Value — Number of Exited Companies Source: KVCA

\* As of December 31, 2021

\*\* The number of exited companies is based on the aggregate value of exits.

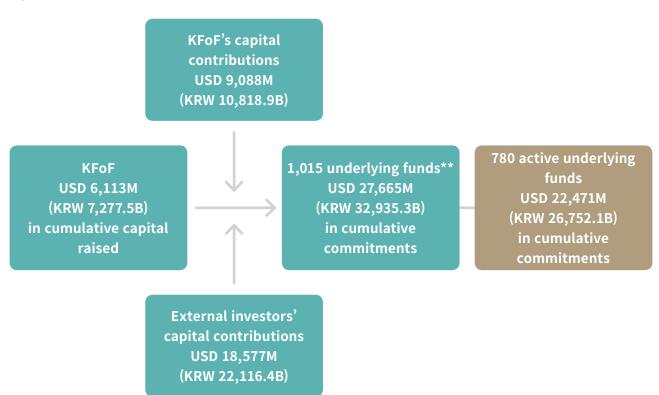




# Korea Fund of Funds

Korea Fund of Funds (KFoF) has secured a cumulative total of USD 6,113 million (KRW 7,277.5 billion) as of December 31, 2021. Together with USD 18,577 million (KRW 22,116.4 billion) contributed by external investors, KFoF has so far created venture capital (VC) funds collectively worth USD 27,665 million (KRW 32,935.3 billion) on a cumulative basis. Of its underlying funds, 780 VC funds are operating currently with USD 22,471 million (KRW 26,752.1 billion) in cumulative commitments. Since its inception to date, KFoF has deployed USD 21,284 million (KRW 25,338.2 billion) in 8,373 companies\* through its 1,015 underlying funds.\*\*

Figure 1) KFoF at a Glance

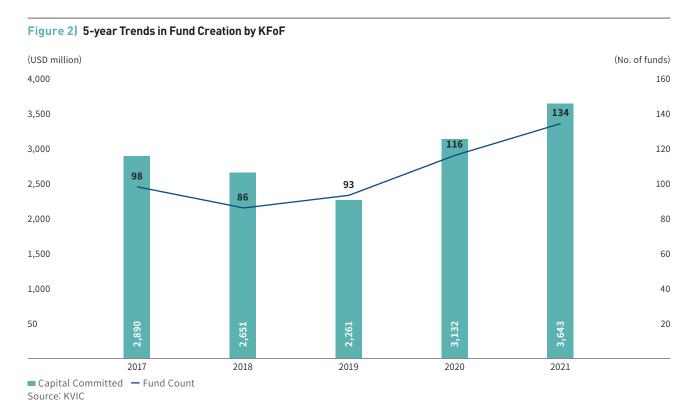


Overlapping companies were removed from aggregate investment activity data.

<sup>\*\*</sup> The above underlying funds include Korea Venture Funds (KVFs), new technology venture investment partnerships, private equity funds (PEFs), corporate restructuring companies (CRCs), and private investment funds.

# **Fundraising**

The year 2021 saw the launch of 134 new VC funds by KFoF with aggregate capital commitments of USD 3,643 million (KRW 4,337.2 billion). The fund count rose by 18 and the amount of capital committed grew by 16.3% in 2021 compared to the previous year.



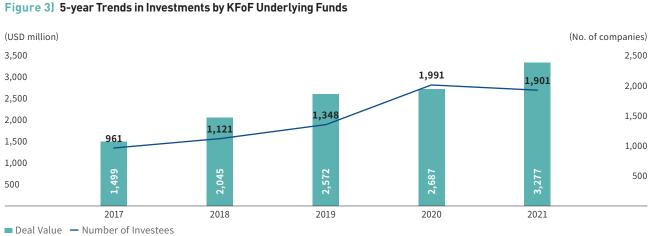
<sup>\*</sup> As of December 31, 2021

<sup>\*\*</sup> The total amount invested between 2017 and 2021 is based on available data at the end of each year.

# Investments

# Investments by KFoF Underlying Funds

In 2021, USD 3,277 million (KRW 3,901.7 billion) was invested in 1,901 companies by KFoF through its 483 underlying VC funds. Aggregate deal value increased by 22%, whereas the number of investee or portfolio companies decreased by 4.5%, compared to the previous year.



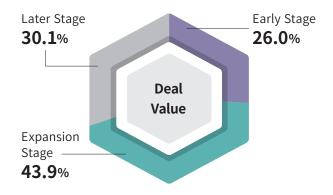
Source: KVIC

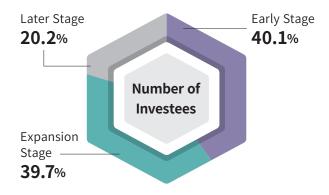
- As of December 31, 2021
- The total amount invested between 2017 and 2021 is based on available data at the end of each year.
- \*\*\* The number of investees above excludes overlapping companies.

#### Deals by Stage

Throughout 2021, companies in their early stage (defined as being 3 years old or younger) acquired USD 851.6 million (KRW 1,013.8 billion), representing 26% of fresh VC investments made by KFoF through its underlying funds. Companies in their expansion stage (3-7 years old) raked in USD 1,439.8 million (KRW 1,714.1 billion), 43.9% of the total investments by the KFoF underlying funds, and those in their later stage (above 7 years old) secured USD 986 million (KRW 1,173.8 billion), 30.1% of the total. Among investee companies, there were 772 early-stage companies (40.1% of total investee count), 764 expansion-stage companies (39.7%), and 388 later-stage companies (20.2%). Deal value increased by 22%, but the number of investee companies dropped by 4.4% from a year ago. The fall in investee count was driven by a decline in earlystage investments. Companies in their expansion and later stages received more investments in 2021 than in the previous year. On the other hand, companies in their early stage saw YoY decreases in both deal value and investee count.

Figure 4) 2021 Deal Activity by Stage - KFoF Underlying Funds





Source: KVIC

#### **Deals by Industry**

The largest recipient of VC investments by the KFoF underlying funds in 2021 was ICT services with USD 819.2 million (KRW 975.2 billion), accounting for 25% of the total deal value. Biotechnology/healthcare was the second largest with USD 779.7 million (KRW 928.2 billion) or 23.8% of the total, followed by distribution/services with USD 515.4 million (KRW 613.6 billion) or 15.7%. The industry with the largest number of companies invested by the KFoF underlying funds was also ICT services with 611 companies (29.2% of total investees), followed by distribution/services (18.1%) and biotechnology/healthcare (17.1%). Biotechnology/healthcare had the highest average investment per company, amounting to USD 2.2 million (KRW 2.6 billion).

Figure 5) 2021 Deal Activity by Industry - KFoF Underlying Funds



No	Sector	% of Total
1	ICT Services	25.0
2	Biotech/Healthcare	23.8
3	Distribution/Services	15.7
4	Electrics/Machinery/Equipment	9.2
5	Other	8.3
6	Film and TV/Performing Arts/Recording	6.2
7	ICT Manufacturing	4.3
8	Game	3.8
9	Chemicals/Materials	3.7

6	7 8 9
5	Number of
	Investees
4	
	3 2

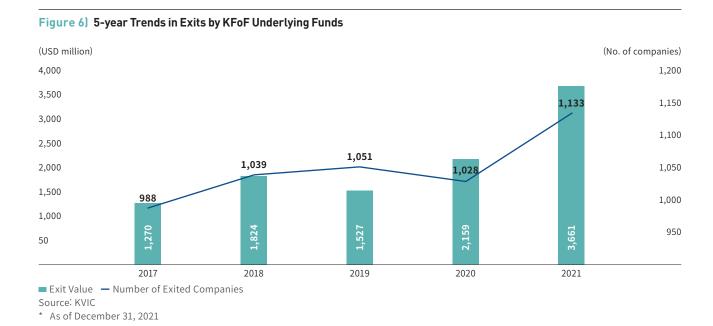
No	Sector	% of Total
1	ICT Services	29.2
2	Distribution/Services	18.1
3	Biotech/Healthcare	17.1
4	Film and TV/Performing Arts/Recording	8.7
5	Electrics/Machinery/Equipment	8.2
6	Other	7.8
7	ICT Manufacturing	4.0
8	Game	3.5
9	Chemicals/Materials	3.3

Source: KVIC

# **Exits**

# **Exits by KFoF Underlying Funds**

In 2021, exits from 1,133 companies, collectively valued at USD 3,661 million (KRW 4,358.9 billion), were made by the underlying VC funds of KFoF. Overall exit value includes USD 1,017 million (KRW 1,210.5 billion) in invested capital and USD 2,645 million (KRW 3,148.4 billion) in proceeds, achieving a 3.6x multiple on invested capital (MOIC). The exit value jumped by 69.6% YoY and the number of exited companies rose by 10.2% YoY.



# **Exit Value and Exits by Industry**

The largest exit in 2021 was valued at USD 369.1 million (KRW 439.4 billion) and the highest exit multiple was 223.9x. By industry, ICT services was the top-ranked industry for exit activity in 2021, representing 34.6% (USD 1,265 million or KRW 1,506.7 billion) of total exit value, followed by biotechnology/healthcare with 25% (USD 914.3 million or KRW 1,088.5 billion), and distribution/services with 13.7% (USD 500.4 million or KRW 595.8 billion). By sub-industry, software accounted for the largest proportion of the total exit value (29.6%), amounting to USD 1,084 million (KRW 1,290.6 billion). Medical materials/pharmaceuticals came in second with 14% (USD 512 million or KRW 609.3 billion), followed by medical devices with 10.7% (USD 392 million or KRW 466.4 billion), game software with 9.5% (USD 349 million or KRW 414.9 billion), and professional services with 8.7% (USD 320 million or KRW 381.3 billion).



Through the second half of 2021, USD 1,840 million (KRW 2,190.5 billion) was deployed into 1,119 companies and projects by KFoF via its underlying VC funds, showing a 14.5% year-over-year (YoY) increase in total amount invested and a 20.1% YoY decrease in the number of investee or portfolio companies. The average investment per company was USD 1.6 million (KRW 1.96 billion) in the second half of 2021, up 43.2% from USD 1.1 million (KRW 1.37 billion) in the second half of 2020.

#### **Overview of KVIC Industry Classification**

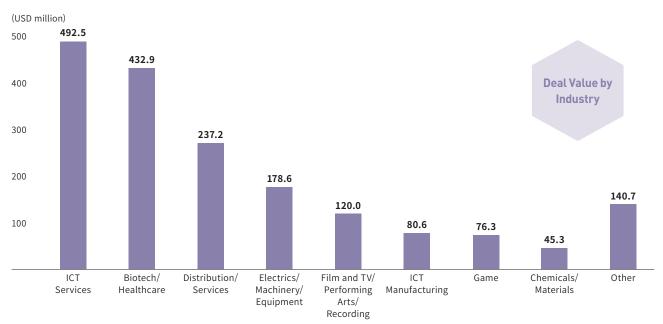
KVIC sorts portfolio companies into 9 industries and 36 sub-industries and compiles data accordingly.

- **9 industry categories:** 1) biotechnology/healthcare; 2) ICT services; 3) distribution/services; 4) electrics/machinery/ equipment; 5) ICT manufacturing; 6) game; 7) chemicals/materials; 8) film and TV/performing arts/recording; and 9) other.
- ② 36 sub-industry categories: 1) medical materials/pharmaceuticals; 2) medical devices; 3) healthcare facilities/services; 4) software; 5) information services; 6) communications; 7) wholesale and retail trade; 8) professional services; 9) transportation; 10) education; 11) accommodation/food services; 12) general purpose machinery; 13) transport equipment and parts; 14) precision instruments; 15) electrical equipment; 16) semiconductor/other electronic components; 17) broadcasting and communications equipment; 18) computer/peripheral equipment; 19) audio and video equipment; 20) game software; 21) sports/leisure; 22) chemical materials/products; 23) metals; 24) non-metallic minerals; 25) rubber/ plastics; 26) audiovisual content; 27) publishing/broadcasting; 28) performing arts/exhibition/music; 29) food and beverages; 30) construction; 31) finance; 32) energy/resources; 33) wood/paper/printing/furniture; 34) real estate/renting and leasing; 35) textiles/clothing/leather; and 36) other.

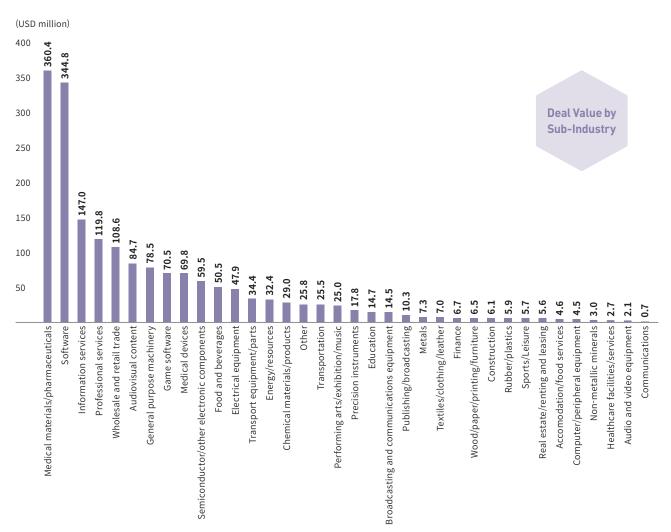
#### Table 1) KVIC Industry and Sub-Industry Classification

Industry	Biotech/Healthcare	ICT Services		Distribution/Services	
Sub- Industry	Medical devices; medical materials/pharmaceuticals; healthcare facilities/services	Software; information services; communications		Wholesale and retail trade; professional services; transportation; education; accommodation/food services	
Industry	Electrics/Machinery/ Equipment	ICT Manufacturing		Game	
Sub- Industry	General purpose machinery; transport equipment/parts; precision instruments; electrical equipment	Semiconductor/other electronic components; broadcasting and communications equipment; computer/peripheral equipment; audio and video equipment		Game software; sports/leisure	
Industry	Chemicals/Materials			Film and TV/Performing Arts/Recording	
Sub- Industry	Chemical materials/products; metals; non-metallic minerals; rubber/plastics			Audiovisual content; publishing/ broadcasting; performing arts/exhibition/ music	
Industry	Other				
Sub- Industry	Food and beverages; construction; finance; energy/resources		Wood/paper/printing/furn textiles/clothing/leathe	niture; real estate/renting and leasing; r; other	

Figure 1) 2H2021 KFoF Investment Activity by Industry and Sub-Industry



Source: KVIC



Source: KVIC

On an industry-by-industry basis, ICT services attracted USD 492.5 million (KRW 586.3 billion) from the KFoF underlying funds, up 30.3% compared to the same period last year. While biotechnology/healthcare secured USD 432.9 million (KRW 515.3 billion), a 6.2% YoY decline, distribution/services received USD 273.2 million (KRW 325.3 billion), a 4.6% YoY uptick. ICT services, biotechnology/healthcare, and distribution/services saw strong VC investment activity over the past five years. This trend has continued into 2021. It is noteworthy that YoY change in investment value varied from one industry to another in the second half of 2021. Game and electrics/machinery/equipment experienced investment surge by 104.3% and 99.2% YoY, totaling USD 76.3 million (KRW 90.8 billion) and USD 178.6 million (KRW 212.7 billion), respectively. On the other hand, chemicals/materials received USD 45.3 million (KRW 53.9 billion), down 36.9% YoY, recording the lowest amount invested by KFoF. Biotechnology/healthcare showed the largest average deal size per company, amounting to USD 2.4 million (KRW 2.83 billion).

At the sub-industry level, medical materials/pharmaceuticals pulled in USD 360.4 million (KRW 429.1 billion) in the second half of the year, representing an 8.8% YoY rise. This industry has remained in the top spot in VC investment by the KFoF underlying funds over the recent five years. Other leading industries were software with USD 344.8 million (KRW 410.5 billion), and information services with USD 147 million (KRW 175 billion). In terms of investee count, software and medical materials/ pharmaceuticals ranked first and second, respectively.

In the second half of 2021, there were 20 mega-deals with a deal value greater than USD 8.4 million (KRW 10 billion). The mega-deal count dropped by 2 compared to the same period last year. By industry, 2021 saw six mega-deals in ICT services and five mega-deals in distribution/services. In the meantime, the number of deals valued at USD 4.2 million (KRW 5 billion) or greater climbed up by 16 YoY to 100 in the second half of 2021. The largest receiver of VC funding from KFoF was a biotech company which is developing new drugs such as anticoagulant drugs.

Figure 2) Changes in the Industry Breakdown of VC Investments by KFoF Underlying Funds

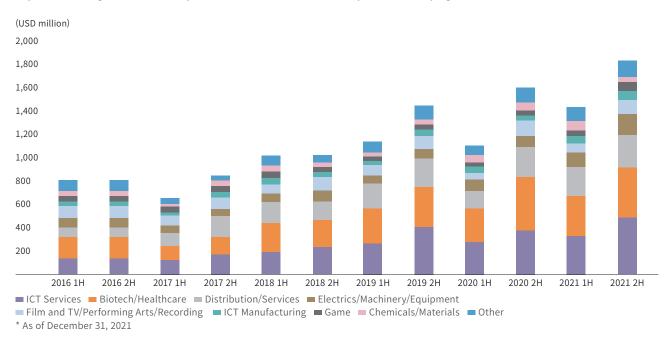
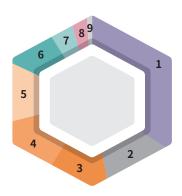


Figure 3) 2H2021 Industry Breakdown of Companies with USD 4.2M+ (KRW 5B+) in VC Funding from KFoF Underlying Funds



No	Sector	% of Total
1	Biotech/Healthcare	34
2	ICT Services	13
3	Distribution/Services	12
4	Other	12
5	Chemicals/Materials	11
6	Electrics/Machinery/Equipment	9
7	ICT Manufacturing	5
8	Game	3
9	Film and TV/Performing Arts/Recording	1

Source: KVIC

Table 2) 2H2021 VC Investments by KFoF Underlying Funds

(USD million)

Industry/Sub-industry	2H2021	YoY Change	Number of portfolio companies	Average amount invested
Total	1,840.0	14.5%	1,119	1.6
ICT Services	492.5	30.3%	347	1.4
Software	344.8	37.3%	234	1.5
Information services	147.0	16.8%	111	1.3
Communications	0.7	-32.0%	2	0.3
Biotech/Healthcare	432.9	-6.2%	182	2.4
Medical materials/pharmaceuticals	360.4	-8.8%	147	2.5
Medical devices	69.8	8.5%	33	2.1
Healthcare facilities/services	2.7	44.3%	2	1.3
Distribution/Services	273.2	4.6%	172	1.6
Professional services	119.8	6.7%	69	1.7
Wholesale and retail trade	108.6	-11.5%	85	1.3
Transportation	25.5	27.5%	5	5.1
Education	14.7	335.9%	11	1.3
Accommodation/food services	4.6	74.3%	2	2.3
Electrics/Machinery/Equipment	178.6	99.2%	93	1.9
General purpose machinery	78.5	137.7%	44	1.8
Electrical equipment	47.9	204.9%	23	2.1
Transport equipment/parts	34.4	41.5%	15	2.3
Precision instruments	17.8	7.3%	11	1.6
Film and TV/Performing Arts/Recording	120.0	-11.6%	122	1.0
Audiovisual content	84.7	-18.4%	96	0.9
Performing arts/exhibition/music	25.0	19.0%	20	1.2
Publishing/broadcasting	10.3	-5.1%	6	1.7
ICT Manufacturing	80.6	89.0%	45	1.8
Semiconductor/other electronic components	59.5	131.1%	32	1.9
Broadcasting and communications equipment	14.5	41.0%	7	2.1
Computer/peripheral equipment	4.5	-7.9%	4	1.1
Audio and video equipment	2.1	20.7%	2	1.1

Industry/Sub-industry	2H2021	YoY Change	Number of portfolio companies	Average amount invested
Game	76.3	104.3%	42	1.8
Game software	70.5	179.0%	38	1.9
Sports/leisure	5.7	-52.5%	4	1.4
Chemicals/Materials	45.3	-36.9%	30	1.5
Chemical materials/products	29.0	-48.5%	19	1.5
Metals	7.3	67.7%	3	2.4
Rubber/plastics	5.9	9.9%	5	1.2
Non-metallic minerals	3.0	-46.7%	3	1.0
Other	140.7	8.5%	86	1.6
Food and beverages	50.5	103.8%	27	1.9
Wood/paper/printing/furniture	32.4	343.1%	11	2.9
Other	25.8	60.6%	21	1.2
Textiles/clothing/leather	7.0	-11.2%	8	0.9
Finance	6.7	-82.9%	4	1.7
Wood/paper/printing/furniture	6.5	-68.0%	6	1.1
Construction	6.1	344.2%	3	2.0
Real estate/renting and leasing	5.6	-55.3%	6	0.9

Source: KVIC

Table 3 below lists the hashtags that contain keywords describing the features of a product or service developed, produced or provided by portfolio companies snagging USD 4.2 million (KRW 5 billion) or more in VC funding from KFoF through its underlying funds in the second half of 2021. These hashtags, sorted by industry, aim to help readers better understand the characteristics of portfolio companies within the KFoF underlying funds.

<sup>\*</sup> As of December 31, 2021

# Table 3) Keyword Hashtags for Portfolio Companies with USD 4.2M+ (KRW 5B+) VC Funding from KFoF Underlying Funds in 2H2021

#Chat Solution for Customer Service #Food Content Creation #HR Management System for People with Disabilities #AR Solution for Industry Applications #Smart Work #OTT Service #Intellectual Property (IP) Trading Platform #AI Tutor #Global Distribution System (GDS) and Property Management System (PMS) #Online Secondhand Marketplace #Discretionary Robo Advisor #Smart Mobility Solution #Car Security Solution #AI API #English Education Platform #SaaS-based Data Governance Solution #Mobile Social Dating Platform #Radar for Advanced Driver Assistance System (ADAS) #Babysitter-Matching Platform #Healthcare Platform #AI-based Rare Disease Diagnosis #Insurance Solution
#Microbiome-based Dietary Supplements #HMOs #Larger Molecule Dermal Filler #Small Molecule Orphan Drugs #Small Molecule Cancer Drugs #Bacteriophage-based Drugs for Treatment of Inflammatory Bowel Disease (IBD) #Long Acting Biopharmaceuticals #Surgical Robots for Cardiovascular Intervention #Novel Antibody Drug Conjugates (ADCs) #Medications for IBD and Hepatic Fibrosis #Anti-Cancer Drugs #Drugs for Progeria #Anti-CD47 Drug for Cancer Immunotherapy #Digital Therapeutics #Anti-Hepatocyte Growth Factor (HGF) Antibodies and CAR-T Cell Therapies #Microbiome-based Immuno-Oncology Drug #Cancer Drug #Human Skin Model Test #Medications for Rare Muscle Diseases #Organoid-based Medicine #Anti-Cancer Drugs and Autoimmune Drugs #New mRNA-based Drug #Coagulation Analyzer #Microbiome Contract Development and Manufacturing Organization (CDMO) #Immunotherapy Drug and Cancer Vaccine #Ultra-Compact Medical Laser #Biodegradable Medical Implant Materials #Rehabilitation Robots and Remote Rehabilitation Platform #Electroceutical Device to Treat Eye Disorders #Sleep Disorder Diagnostic/Analytical Platform #Wearable Electrocardiogram (ECG) Device #Psychological Counseling Service
#Mobile Advertising Platform #Immuno-Oncology Drug #Manufacturing/Distribution of Golf Apparel #Self-Serve Advertising Platform #Distribution/Sale of Livestock Products #B2B Fashion Platform for Wholesalers and Retailers #Pharmaceutical Wholesale Platform #Distribution of Premium Korean Beef #Luxury eCommerce Platform #eCommerce Fulfillment #Ride Hailing Service #Early Morning Delivery and Fulfillment #eSports Events and Education #Online Coding Education Platform #Food Brands Commerce
#Device to Seal Rotating Shaft without Lubrication #Micro Bits for Printed Circuit Boards (PCBs) and Whirling Shafts #Cutting Equipment for LCD Panel Production #AMOLED Mask Tension Welding Device #Wearable Robots #Solid Oxide Fuel Cell (SOFC) #Vanadium Redox Flow Battery (VRFB) #Small Satellite Launch Vehicle Development and Launch Service #Ultra-Compact Electrical Vehicle (EV) #Optical Components
#OTT Content Production #Entertainment #Entertainment Planning and eSport Team Operation #Webtoon/Webnovel Production
#Zener Diode #Cloud-based Chip Design Platform #Implementation of Hi Pass Lane Control System
#Game and Animation Production #Video Game #Mobile Game
#Production/Sales of Dimethyl Ether (DME) and Hydrogen #Coatings for EV Battery Pack Thermal and Electrical Insulation
#Manufacturing/Distribution of Powdered Foods #Recombinant Supplements #Nutritional Supplement Manufacturing #Home Replacement Meal (HMR)_Fresh Meals #Waste Collection and Transport #Possession/ Operation of Small and Medium-Sized Solar Panels #Treatment of Used Oil/Redefined Oil #Engineering/ Manufacturing of Equipment for Waste Sorting and Recycling Facilities

Source: KVIC



# ANALYSIS OF UNICORNS AND UNICORN CANDIDATES IN KOREA

This report provides an analysis of portfolio companies worth at least USD 168 million (KRW 200 billion) in the underlying funds of KFoF with a particular focus on company characteristics. The analysis in this issue of KVIC MarketWatch drew upon data on portfolio company valuations as of June 30, 2021.

The exchange rate applied at the time of writing is USD 1 = KRW 1,190.5 (basic exchange rate or market average rate as of December 31, 2021)

# 1. Current State of KFoF-backed Unicorns and Unicorn Candidates

#### Introduction

A unicorn is an imaginary horse-like creature which has a single horn on its forehead. What is a unicorn in the world of business? The term was first coined in 2013 by Aileen Lee, founder of U.S. venture capital firm Cowboy Ventures. Today, the term "unicorn" is commonly used to describe a privately held startup company with a valuation of USD 1 billion or more.

According to The Complete List of Unicorn Companies compiled by U.S. market research firm CB Insights, there are 1,071 unicorn companies around the world as of April 1, 2022. Collectively, these companies are worth USD 3,524.58 billion. South Korea is home to 12 unicorns, including Toss, Yello Mobile, Kurly, WeMakePrice, Musinsa, Ridi, GPclub, L&P Cosmetic, Aprogen, Yanolja, Socar, and Dunamu, with a total valuation of USD 27.19 billion.

KVIC MarketWatch provides a semi-annual report shedding light on the key features of unicorns and unicorn candidates identified in the portfolios of KFoF's underlying funds. This report assesses the distribution of KFoF-backed unicorns and unicorn candidates-portfolio companies worth at least USD 168 million (KRW 200 billion)-by valuation, funding amount, industry, company age, and revenue. We used valuation as a filter to identify KFoF-backed unicorns and unicorn candidates, with data derived from portfolio company valuations as of June 30, 2021. For analysis purposes, unicorns and unicorn candidates we identified were grouped into three cohorts of companies. There are three valuation ranges used to determine which cohort a company belongs to: i) between USD 168 million and USD 420 million (KRW 200 billion - KRW 500 billion), ii) between USD 420 million and USD 840 million (KRW 500 billion rand USD 840 million), and iii) USD 840 million (KRW 1 trillion) or more. The report also looks at semi-annual trends in unicorns and unicorn candidates. In this report, unicorns refer to KFoF-backed portfolio companies belonging to the cohort of companies valued over USD 840 million (KRW 1 trillion).

#### **Valuation**

Unicorns and unicorn candidates worth USD 168 million or higher totaled 87 companies as at June 2021, down 4 (21 new entrants and 25 drop-offs) from 91 companies as at December 2020, the valuation cut-off month for our last analysis. To break that number down, there were 10 companies valued at USD 840 million or more, 10 companies valued between USD 420 million and USD 840 million, and 67 companies valued between USD 168 million and USD 420 million, which remained at similar levels seen in our previous analysis six months ago.

The average valuation of the 87 companies was USD 901 million (KRW 1,072.5 billion), 96.4% higher than that of the companies identified as unicorns and unicorn candidates in the previous analysis. The median valuation was USD 269 million (KRW 320.1 billion), similar to the previous half's level.

The jump in the average valuation was driven largely by a half-on-half (HoH) increase in the number of companies worth over USD 840 million and their very high valuations. The cohort of companies in the USD 840 million-plus valuation range saw a staggering 135.2% HoH increase in average valuation, because seven existing companies were identified as unicorns again in this analysis, recording a sharp rise in their individual valuations, and three new entrants to the unicorn cohort also achieved high valuations. On the other hand, the remaining cohorts of companies in valuation ranges below USD 840 million showed little change in average valuation from the levels seen in our last analysis.

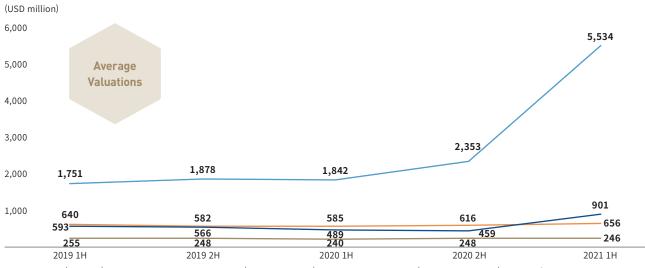
Table 1) Distribution of Unicorns and Unicorn Candidates by Valuation as of June 30, 2021

Valuation Range	Number of Companies (▲ indicates an HoH increase; ▼ indicates an HoH decrease)			
USD 840 million or more (KRW 1 trillion or more)	10 (▲3)			
		Valuation Range	No. of Companies	
		USD 756M - USD 840M (KRW 900B - KRW 1T)	2 (-)	
USD 420 million – USD 840 million	10 (-2)	USD 672M - USD 756M (KRW 800B - KRW 900B)	2 (-)	
(KRW 500 billion – KRW 1 trillion )	10 (▼2)	USD 588M - USD 672M (KRW 700B - KRW 800B)	4 (▲1)	
		USD 504M - USD 588M (KRW 600B - KRW 700B)	1 (▼1)	
		USD 420M - USD 504M (KRW 500B - KRW 600B)	1 (▼2)	
	67 (▼5)	USD 336M - USD 420M (KRW 400B - KRW 500B)	10 (▼1)	
USD 168 million – USD 420 million (KRW 200 billion – KRW 500 billion)		USD 252M - USD 336M (KRW 300B - KRW 400B)	16 ( <b>▼</b> 2)	
Anna 200 Silion Mill 300 Silion		USD 168M - USD 252M (KRW 200B - KRW 300B)	41 (▼2)	
Total	87 (▼4)			

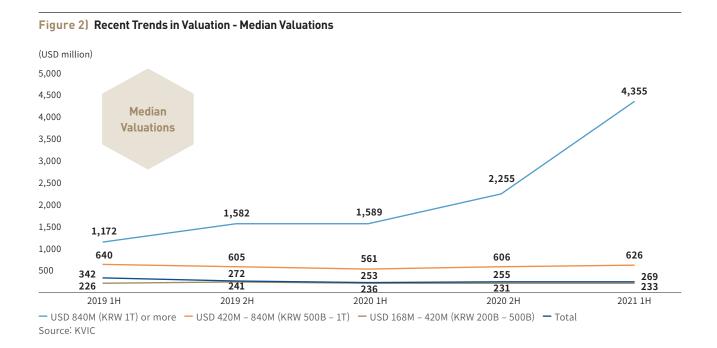
- The cohort of companies worth USD 840 million or more gained three new entrants and retained seven existing companies.
- The cohort of companies worth between USD 420 million and USD 840 million gained one new entrant and let three existing companies out.
- The cohort of companies worth less than USD 420 million gained 19 new entrants and let 24 existing companies out.

Source: KVIC

Figure 1) Recent Trends in Valuation - Average Valuations



- USD 840M (KRW 1T) or more  $\,$  – USD 420M – 840M (KRW 500B – 1T)  $\,$  – USD 168M – 420M (KRW 200B – 500B)  $\,$  – Total Source: KVIC



# **Funding Amount**

The underlying funds of KFoF and other FoFs managed by KVIC funneled USD 1.25 billion (KRW 1,482.7 billion) into the 87 companies analyzed here by the end of June 2021. The average deal size stood at roughly USD 14 million (KRW 17 billion). This was a 16.3% HoH uptick, reflecting an 11.2% HoH increase in aggregate deal value, despite the drop in the number of unicorns and unicorn candidates.

Although the gap in the average deal size between the cohort in the USD 840 million-plus range and the cohort in the USD 420 million – USD 840 million range had been narrowed to approximately 1.1x in 2020, this funding gap was widened to nearly 1.43x due to a rise of 19.8% HoH in the average deal size for the cohort in the USD 420 million – USD 840 million range to USD 21 million (KRW 25.1 billion) as of June 30, 2021. Meanwhile, the average deal size for the cohort in the USD 168 million – USD 420 million range grew by roughly 20.1% HoH to about USD 13 million (KRW 15.8 billion).

Figure 3) Recent Trends in Deal Size - Average Deal Sizes

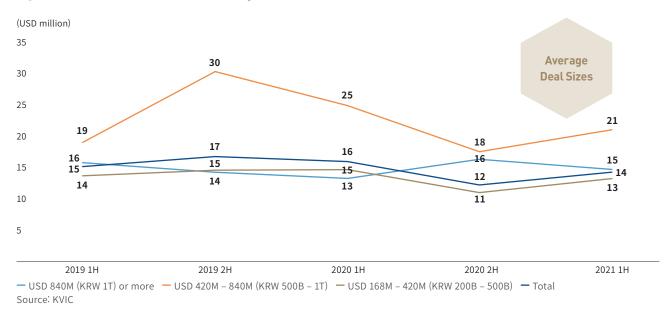
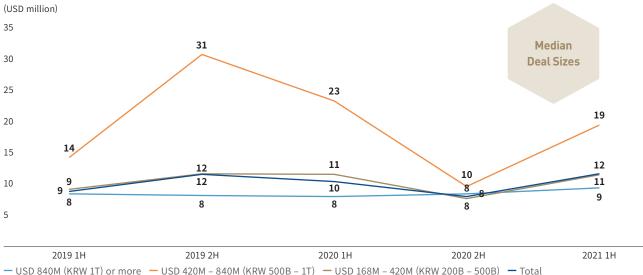


Figure 4) Recent Trends in Deal Size - Median Deal Sizes



— USD 840M (KRW 1T) or more — USD 420M - 840M (KRW 500B − 1T) — USD 168M - 420M (KRW 200B - 500B) — Total Source: KVIC

# **Industry**

When the unicorns and unicorn candidates are broken down by industry and sub-industry according to KVIC Industry Classification (see the last page of this report for more details), the top three industries for the births of unicorns and unicorn candidates were ICT services, biotechnology/healthcare, and distribution/services. Out of the 87 companies, 34 (39.1%) are in ICT services, 27 (31.0%) in biotechnology/healthcare, and 8 (9.2%) in distribution/services. The combined share of the three industries reached 79.3%. This was also as high as 75.8% in our previous analysis and over 80% in 2019.

Sixteen out of 21 new entrants to the list of unicorns and unicorn candidates came from ICT services and biotechnology/healthcare, each with eight companies, which allows us to infer surges in both VC deals and valuations for ICT and biotech companies. While the game industry gained two newcomers, distribution/services, chemicals/materials, and ICT manufacturing gained one newcomer each. At the subindustry level, the increase in the number of unicorns and unicorn candidates was concentrated in medical materials/pharmaceuticals and software, each with eight new entrants. Notably, in the case of the ICT services industry, only software added eight new entrants to the list, in contrast to the addition of six new ones from information services in our last analysis.

Table 2) Distribution of Unicorns and Unicorn Candidates According to KVIC Industry Classification

KVIC Industry Classification	Number of Companies (▲ indicates an HoH increase; ▼ indicates an HoH decrease)		
		Sub-Industry Classification	No. of Companies
ICT Services	34 (▲1)	Software	22 (▲5)
		Information services	12 (▼3)
Diatach/Haalthaava	27 ( 🛕 1 )	Medical materials/pharmaceuticals	22 (▲2)
Biotech/Healthcare	27 (▲1)	Medical devices	5 (▼1)
Distribution/Services	8 (▼8)	Wholesale and retail trade	5 (▼6)
DISTRIBUTION/Services		Professional services	3 (▼1)
Game	7 (▲4)	Game software	7 (▲4)
Chemicals/Materials	4 (-)	Chemical materials/products	4 (-)
ICT Manufacturing	2 (▲2)	Semiconductor/other electronic components	1 (▲1)
ICT Manufacturing		Computer/peripheral equipment	1 (▲1)
		Real estate/renting and leasing	2 (-)
Other	5 (▼3)	Finance	2 (▲1)
		Textiles/clothing/leather	1 (▼1)
Total	87 (▼4)		

Source: KVIC

Table 3) Distribution of Unicorns and Unicorn Candidates According to the Korean Standard Industrial Classification (KSIC)

Korean Standard Industrial Classification (KSIC)	No. of Companies	Korean Standard Industrial classification (KSIC)	No. of Companies
Application software publishing	17 (▲3)	Other professional services	1 (-)
Research and experimental development on medical sciences and pharmacy	15 (-)	Manufacture of work wear and similar garments	1 (-)
Database and online information provision	6 (▼2)	Funeral homes and funeral related services	1 (-)
Online game software publishing	6 (▲3)	Other activities auxiliary to financial service activities n.e.c.	1 (-)
System software publishing	5 ( <u>^2</u> )	Wholesale of cosmetics and related products	1 (-)
Portals and other internet information media service activities	4 (▼1)	Manufacture of medical supplies and related other medicaments	1 (-)
Manufacture of other medical and surgical equipment and orthopedic appliance n.e.c.	4 (▼1)	Renting of other real estate	1 (-)
Manufacture of medicinal chemicals and antibiotics	3 (▲2)	Manufacture of eyeglasses and optical lenses	1 (▲1)
Manufacture of perfumes and cosmetics	3 (▲1)	Environmental consulting and related engineering services	1 (▲1)
Electronic commerce on a fee or contract basis via internet	2 (▼3)	Other financial investment businesses	1 (▲1)
Manufacture of biological products	2 (-)	Manufacture of storage devices	1 (▲1)
Manufacture of coal and other basic organic chemicals	1 (▼1)	Other information technology and computer service activities	1 (▲1)
Electronic commerce via internet	1 (▼1)	Mobile game software publishing	1 (▲1)
Renting of motor vehicles	1 (-)	Manufacture of non-memory electronic integrated circuits	1 (▲1)
Manufacture of animal medicaments	1 (-)	Wholesale of other specialized goods n.e.c.	1 (▲1)
Computer programming services	1 (-)		

(▲ indicates an HoH increase; ▼ indicates an HoH decrease) Source: KVIC

# **Company Age**

The average age of the 87 unicorns and unicorn candidates was 9.4 years as of June 30, 2021, up 1.4 years from that of the 91 companies analyzed as of December 31, 2020. By valuation range, the average age was 11 years for the cohort in the USD 840 million-plus range, 9.3 years for the cohort in the USD 420 million – USD 840 million range, and 9.2 years for the cohort in the USD 168 million – USD 420 million range. The average age increased across valuation ranges, except the USD 840 million-plus range. With the youngest age at 0.7 year and the oldest at 21.7 years, the company age difference rose by 2 years, surpassing 20 years.

Table 4) Distribution of Unicorns and Unicorn Candidates by Company Age as of June 30, 2021

Valuation Range	Average Company Age (number of years)	Oldest	Youngest
	(▲ indicates an I	HoH increase; ▼ indicates a	n HoH decrease)
USD 840 million or more (KRW 1 trillion or more)	11.0 (▼0.7)	18.3 (▲0.5)	7.3 (▼0.1)
USD 420 million – USD 840 million (KRW 500 billion – KRW 1 trillion)	9.3 (▲1.2)	21.7 (▲7.9)	3.0 (▲0.5)
USD 168 million – USD 420 million (KRW 200 billion – KRW 500 billion)	9.2 (▲1.5)	21.2 (▲0.5)	0.7 (▼0.9)
Total	9.4 (▲1.4)	21.7 (▲1.0)	0.7 (▼0.9)

Source: KVIC

#### Revenue

Results from the revenue analysis show that the average revenue of the 87 companies was USD 100 million (KRW 119.33 billion). Our analysis used revenue data complied as of December 31, 2020 (FY2020) according to each company's accounting policies. The average revenue for FY2020 was 8.3% greater than that of the companies covered in our last analysis as of June 30, 2020 for the year ended December 31, 2019 (FY2019). The average revenue growth was due primarily to the uptick in the revenues of unicorn companies worth USD 840 million or more.

The average revenue for the cohort of companies valued in the USD 840 million-plus range stood at USD 461 million (KRW 548.8 billion), 60.0% higher than that for the same cohort analyzed as of June 30, 2020. Conversely, the average revenue shrank by 13.7% to USD 166 million (KRW 197.45 billion) for the cohort in the USD 420 million – USD 840 million range. It also dropped by 4.7% to USD 37 million (KRW 43.58 billion) for the cohort in the USD 168 million – USD 420 million range.

Table 5) FY2020 Average Revenues of Unicorns and Unicorn Candidates

Valuation Range	Average Revenue (USD million)
USD 840 million or more (KRW 1 trillion or more)	461.0 (60.0% YoY)
USD 420 million – USD 840 million (KRW 500 billion – KRW 1 trillion)	165.9 (-13.7% YoY)
USD 168 million – USD 420 million (KRW 200 billion – KRW 500 billion)	36.6 (-4.7% YoY)
Total	100.2 (8.3% YoY)

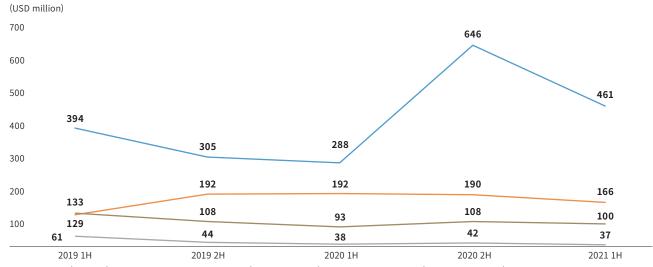
Source: DART and other sources

Table 6) FY2020 Revenue Distribution of Unicorns and Unicorn Candidates

Revenue Range	Number of Companies (▲ indicates an HoH increase; ▼ indicates an HoH decrease)
USD 84 million or more (KRW 100 billion or more)	23 (▼2)
USD 42 million – USD 84 million (KRW 50 billion – KRW 100 billion)	14 (▼2)
USD 8.4 million – USD 42 million (KRW 10 billion – KRW 50 billion)	17 (-)
Less than USD 8.4 million (Less than KRW 10 billion)	33 (-)
Total	87 (▼4)

Source: DART and other sources

Figure 5) Recent Trends in Average Revenue



— USD 840M (KRW 1T) or more — USD 420M – 840M (KRW 500B – 1T) — USD 168M – 420M (KRW 200B – 500B) — Total

Source: DART and other sources

# **Key Takeaways**

The characteristics we identified among KFoF-backed unicorn candidates valued at USD 168 million (KRW 200 billion) or more can be boiled down to the following: The average company is 9.4 years old, garnering revenue of USD 100 million (KRW 119.3 billion) in FY2020, receiving VC funding of USD 14 million (KRW 17 billion) from the KFoF underlying funds, and achieving a valuation of USD 901 million (KRW 1,072.5 billion).

Although the number of companies identified as unicorns and unicorn candidates fell slightly, the number of unicorns with a valuation of USD 840 million (KRW 1 trillion) or more increased, and their average valuation rose sharply, heralding the possible births of decacorns. Out of the 21 new companies that joined the list of unicorns and unicorn candidates, 16 are from the ICT services and biotechnology/healthcare industries, revealing keen interest in and market participants' expectations towards ICT services, more specifically, software and biotech companies.

In addition, the cohort of companies in the USD 840 million (KRW 1 trillion)-plus valuation range saw a 135.2% HoH increase in average valuation and an 8.3% rise in average revenue in FY2020 over FY2019, both of which indicate the qualitative growth of unicorns.

We hope KVIC's semi-annually updated analysis of unicorns and unicorn candidates to be of use in designing innovative growth policies aimed at fostering unicorn companies in Korea.

# 2. Overview of KVIC Industry Classification

KVIC sorts portfolio companies into 9 industries and 36 sub-industries, and collates data accordingly.

- 9 industry categories: 1) biotechnology/healthcare; 2) ICT services; 3) distribution/services; 4) electrics/machinery/ equipment; 5) ICT manufacturing; 6) game; 7) chemicals/materials; 8) film and TV/performing arts/recording; and 9) other.
- 36 sub-industry categories: 1) medical materials/pharmaceuticals; 2) medical devices; 3) healthcare facilities/services; 4) software; 5) information services; 6) communications; 7) wholesale and retail trade; 8) professional services; 9) transportation; 10) education; 11) accommodation/food services; 12) general purpose machinery; 13) transport equipment and parts; 14) precision instruments; 15) electrical equipment; 16) semiconductor/other electronic components; 17) broadcasting and communications equipment; 18) computer/peripheral equipment; 19) audio and video equipment; 20) game software; 21) sports/leisure; 22) chemical materials/products; 23) metals; 24) non-metallic minerals; 25) rubber/ plastics; 26) audiovisual content; 27) publishing/broadcasting; 28) performing arts/exhibition/music; 29) food and beverages; 30) construction; 31) finance; 32) energy/resources; 33) wood/paper/printing/furniture; 34) real estate/renting and leasing; 35) textiles/clothing/leather; and 36) other.

#### Table 7) KVIC Industry and Sub-Industry Classification

Industry	Biotech/Healthcare	ICT Services		Distribution/Services
Sub- Industry	Medical devices; medical materials/pharmaceuticals; healthcare facilities/services	Software; information services; communications		Wholesale and retail trade; professional services; transportation; education; accommodation/food services
Industry	Electrics/Machinery/ Equipment	ICT Manufacturing		Game
Sub- Industry	General purpose machinery; transport equipment/parts; precision instruments; electrical equipment	Semiconductor/ other electronic components; broadcasting and communications equipment; computer/peripheral equipment; audio and video equipment		Game software; sports/leisure
Industry	Chemicals/Materials			Film and TV/Performing Arts /Recording
Sub- Industry	Chemical materials/products; metals; non-metallic minerals; rubber/plastics			Audiovisual content; publishing/ broadcasting; performing arts/exhibition/ music
Industry	Other			
Sub- Industry	Food and beverages; Wood/paper/prin construction; finance; real estate/rentin energy/resources textiles/clothing/			ng and leasing;



# K-UNICORNS

- ZIGBANG
- NEXT UNICORNS



#### ZIGBANG

Korea's Top Proptech Company

# **Company Overview**

ZIGBANG is Korea's first company to offer real estate online to offline (O2O) services. In 2010, it was founded under the name of Channel Breeze. In 2012, it developed and launched real estate app called ZIGBANG, the first of its kind in Korea. Before the rollout of the ZIGBANG app, house hunting was cumbersome for potential homebuyers and renters. They had to visit different real estate agencies in person to search homes for sale and rent. After the proliferation of real estate apps like ZIGBANG, however, homebuyers and renters can find real estate information quickly and easily with their cell phones. ZIGBANG is still the number one real estate app with the largest market share at nearly 54%, although a variety of real estate apps are available today. The company has built a value chain for a real estate data platform through a series of mergers and acquisitions (M&As) including Hogangnono, a real estate platform providing publicly accessible information on apartment sale and rental deals, WOOZOO, a shared housing platform, and Sugarhill, a developer and operator of Nemo, a commercial real estate platform. In June 2021, it has become the 12th unicorn in Korea.

	Company Brief
CEO	Jason (SungWoo) Ahn
Year of Establishment	November 19,2010
Head Office Address	64, Yeoksam-ro 17-gil, Gangnam-gu, Seoul, South Korea
Number of Employees	Approx. 200
Main Services	ZIGBANG app, Hogangnono app; Ontact Partners; Online Modelhouse
App Downloads (cumulative)	Approx. 30M
Revenue	USD 34.9M ('19) > USD 38.5M ('20) > USD 47.0M ('21)
Lead Investors/ Cumulative Funding	DSC Investment, Altos Ventures, Yuanta Investment, Stonebridge Capital, Goldman Sachs PIA, Atinum Investment/Approx. USD 200.8 million
Valuation	Approx. USD 924 million
Contacts	Website: https://www.zigbang.com/ Email: cs@zigbang.com Partnership Inquiry: partnership@zigbang.com Google Play Store: https://play.google.com/store/apps/details?id=com.chbreeze. jikbang4a&hl=ko≷=US Apple App Store: https://apps.apple.com/kr/app/id503098735

# **Main Services and Their Strengths**

#### (1) Platform Business

The ZIGBANG app provides property listings and other related information, allowing users to search for information on different types of property. While the app charges real estate agents fees for property listings, it provides users with extensive information on listed properties. In its early years, the app offered rental listings mainly for One-Room and Officetel-in other words, studio condos and apartments. In 2016, it expanded the coverage of listing service to include two or more bedroom apartments nationwide. ZIGBANG currently provides listings for all types of houses for sale and rent. The app has map-led search and shows users information on their desired area at a glance. Its intuitive search filters allow users to narrow their search, browsing available listings in the desired area that align with their requirements, such as security deposit and floor plan. In addition, the app offers detailed photos of properties to help users understand the condition and quality of listed properties without an in-person visit.

The Korean housing market is skewed heavily towards apartments given that about 51% of households are living in apartments. To keep up with this trend, the company added new apartment-related services to the app. By offering a new service called VR Home Tour in 2018, the app allows users to virtually walk through each room in an apartment by clicking or tapping to move forward and backward, make measurements, and virtually place furnishings around the apartment. Through 3D Apartment Complex Tour launched in 2021, users can get a bird's eye view and sunlight hours of each unit or each building in an apartment complex.

The company has been operating Daum Real Estate, a real estate platform of web portal Daum, since it signed a partnership with Kakao in 2018. It has continued to branch out into real estate-related areas by acquiring real estate-related companies including Hogangnono, WOOZOO, Sugarhill, IOOD Ventures, which is an operator of hotel-like housekeeping service HOTELIVE, and Movill, which is an apartment management platform. Furthermore, the company is developing technologies related to AI chatbots, property valuation, and trade area analysis, in order to take the leap from the real estate listing platform to a data-based full-service platform through technology-focused management.

Figure 1) Example of 3D Apartment Complex Tour





<sup>\*</sup> Screenshots from the 3D Apartment Complex Tour of Raemian One Bailey, an apartment complex whose official first move-in is scheduled for August 2023

#### (2) Ontact Partners

Ontact Partners is one of services offered within the ZIGBANG app, intended to assist realtors and other real estate-related specialists in finding real estate information, negotiating and arranging real estate transactions, signing contracts, and handling repairs and improvements online. On the part of app users, this service helps users have non-face-to-face meetings with real estate agents while viewing apartment videos created using 3D computer graphics, and even enter into electronic real estate contracts. It also gives users not only access to publicly disclosed information, such as building registers, certificates of title, numerical maps, and cadastral maps, but also 3D virtual tours for property listings as if they were there. As for electronic contracts, real estate brokerage subsidiary Ontact Partners and a local real estate agent jointly sign and seal a real estate contract to improve user trust in the contract, and, in return, split the commission between them. As part of its efforts to encourage greater use of the service, ZIGBANG provides its realtor partners with training and startup support, guarantee insurance, and minimum income guarantee for the first year of the partnership, and finds ways to grow together with them. What's more, the company plans to add a new service called Home+Concierge to Ontact Partners, with the aim of offering all-encompassing housekeeping services from home cleaning, repairs and maintenance to pest control.

#### (3) Online Modelhouse

Pre-sales is a pervasive practice for property sales in the Korean market. In this presale environment, construction companies provide model or show houses in obtaining permits and approvals for apartment presales from relevant local authorities and then commence construction on new apartments. Meantime, a model house gives potential buyers an overall sense of what is on offer-for example, apartment layouts, and interior fixtures and finishes-prior to new apartment subscription. However, model houses that construction companies build cannot showcase all planned layouts for presale apartments. To seize business opportunities arising from this limitation, ZIGBANG launched a new service called Online Modelhouse, which has been thrust into the spotlight especially during the COVID-19 pandemic. Online Modelhouse showcases fully furnished and decorated apartment units by size or unit type using virtual reality (VR) technology, and also gives viewers the experience of walking through apartment units, as if they play games, with 3D MAX CG technology. Since its launch in 2019, this service has been delivered for dozens of pre-sale apartment projects. In particular, GS E&C and Hoban Construction obtained building permits and other regulatory approvals based on their Online Modelhouse without building model houses offline. The Online Modelhouse service has been rapidly growing with more than 20 orders per month taken for construction projects. The company plans to move Online Modelhouses, which it delivered to the websites of client companies, to its metaverse platform.

Figure 2) Example of Online Modelhouse



<sup>\*</sup> Screenshot of Type B apartment unit at Hoban Summit DMC Hills (source: Moneys' news article dated March 11, 2021)



# **List of Korea's Next Unicorns**

As of March 31, 2022

The table below provides an overview of Korean companies that have been selected as the next unicorns over the last three years.

Next unicorns refer to private companies or startups which will most likely to become unicorns. The Ministry of SMEs and Startups (MSS) conducts an annual assessment of promising companies in terms of growth, innovation and market provenness, together with two evaluation teams comprised of experts and selected citizens from all walks of life, respectively, and designates companies that meet its criteria as the next unicorns (preliminary unicorns in its own terms) every year. This list leaves out companies that have made it to the KOSPI or KOSDAQ stock market, have been acquired by other companies or have turned unicorns after they earned the next unicorn designation.

MSS press release issued on February 16, 2022 was used to identify which next unicorn companies have reached unicorn status.

No.	Company Name	Founding Year	Business Overview	Key Indicators *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
1	blank Corporation	2016	<ul> <li>Core product/service: Media commerce or content marketing</li> <li>Business model:</li> <li>blank Corporation generates revenue by outsourcing its product manufacturing to OEMs, creating content for the OEM products and selling them online.</li> <li>The company runs its store on ecommerce platform Cafe24 for selling products under various brand names.</li> <li>In 2020, it set up a new subsidiary in Malaysia in addition to existing ones in Taiwan, Singapore and Hong Kong.</li> <li>blank Corporation has employed so-called 'selection and concentration' strategy by shedding inefficient affiliates including entertainment firm blank.C, travel agency blank.K, and Dr. Denti, and reducing the number of its brands from over 30 to 13.</li> <li>It plans to sell licensed products using the intellectual property (IP) granted by Disney after signing a license agreement with Disney in December 2021, while trying to create its own IP.</li> </ul>	- Revenue: \$98.2M ('18) > \$110.5M ('19) > \$136.4M ('20) - Cumulative funding: \$33.6M ('20) - Lead investors: SoftBank Ventures Asia, SBI Investment, Union Investment Partners - Valuation: \$420M ('20)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
2	FADU	2015	- Core product/service: Fabless semiconductor company focusing on design-related activities - Business model:  * FADU's flagship product is a non-volatile memory express (NVMe)-based solid state drive (SSD: data storage device) controller. The SSD controller is a key component of a data center that determines data processing speed and stability.  * In a partnership with SK Hynix, it supplies SSDs to Meta, the operator of Facebook.  * The company is pressing ahead with plans for an initial public offering (IPO) in 2023.	- Revenue: \$0.2M ('19) > \$1.7M ('20) - Recent order intake: The company won large order worth \$84M in the second half of 2021 Cumulative funding: \$84M ('22) - Lead investors: Reverent Partners, SK infosec - Valuation: \$378M ('21)
3	BankSalad	2012	- Core product/service: App-based personal finance management services tailored to customers based on their financial data - Business model: * The company aims to provide integrated personal finance management services via its app that helps users get a clear picture of their financial assets by tracking and viewing their bank account balance and credit card spending. The app also allows users to compare credit card offers and benefits while offering features like Budget Planner for tracking and sorting personal spending by category, and Finance Secretary for providing advices to keep app users from overspending based on spending records stored in the Budget Planner, as well as finance-related services such as Loan Negotiation. * Its proprietary credit card recommendation engine called Chef sorts a user's credit card spending over the past one year by spend category and analyzes which credit card offers the largest discounts to the user. * The company launched Revenue Management Service for Business Owners and obtained a license for MyData business in January 2021.	- Revenue: \$5.3M ('19) > \$3.4M ('20) - Cumulative downloads: 8.4M ('21) - Cumulative subscribers: 7M ('21) - Cumulative funding: \$108.3M (Aug.'21) - Lead investors: KIA, KT, IMM Investment, Stonebridge Ventures, KB Investment, Kiwoom Investment - Valuation: \$504M ('21)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
4	Korea Credit Data	2016	<ul> <li>Core product/service: Business management services for small and medium-sized businesses via CashNote app</li> <li>Business model:</li> <li>* CashNote provides a wide range of business management services to business owners, including sales management, repeat customer analysis, tax invoices management, integrated delivery sales management, part-timers management, tax return filing, food procurement, marketing and so on.</li> <li>* Korea Credit Data offers its app for free, and instead collects and analyzes data from merchant stores and provides paid services based on the analyzed data to business owners who want more specific services. Its monthly retention rate of paid users reached 95%.</li> <li>* In April 2020, the company launched its data portal where users can view sales trends by region. In 2021, it has been selected as one of MyData operators by the Financial Services Commission (FSC).</li> <li>* Korea Credit Data provides data to banks, public institutions and other organizations. KDB Bank uses the company's data in its loan approval process.</li> <li>* The company has been in strategic investment or cooperative ties with Kakao, KT, GS Holdings, KB Kookmin Bank, and Shinhan Card.</li> </ul>	- Revenue: \$1.6M ('19) > \$2.5M ('20) - CashNote served 0.9M businesses (cumulative) and annual transactions managed via CashNote totaled \$21,999.6M (Nov.'21) Cumulative funding: \$84M (Nov.'21) - Lead investors: GS Holdings, KB Kookmin Bank, QUAD Asset Management, Ryukyung PSG Asset Management, Shinhan Investment - Valuation: \$672M (Nov.'21)
5	Balance Hero	2014	<ul> <li>Core product/service: Mobile recharge and bill payment services offered by True Balance, the most popular app in India</li> <li>Business model:</li> <li>Nearly 90% of smartphone users in India are prepaid customers. True Balance allows users to keep track of prepaid mobile call and data balances. In 2017, the app started to offer new additional features to top up mobile credits and pay utility bills (electricity/gas/direct to home (DTH)-satellite TV).</li> <li>Balance Hero launched an array of financial products available on True Balance in 2019, including Pay Later (microcredit service), Recharge Loan (loan service for users who don't have enough money to do mobile recharge), Cash Loan, and mobile money transfer.</li> <li>The company developed its proprietary AI-powered alternative credit scoring system (ACS), offering users loans based on their ACS rating.</li> </ul>	- Revenue (consolidated): \$0.1M ('19) > \$3.3M ('20) - Cumulative app downloads: 80M ('21); the app ranked first in the Lifestyle Apps category on the Google Play Store The company managed \$84M for lending service (Dec.'21) Cumulative funding: \$84M (Nov.'20) - Lead investors: Krafton, SoftBank Ventures Asia, BonAngels Venture Partners - Valuation: \$189M ('19)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
6	G+Flas	2014	- Core product/service: Genome editing tool CRISPR PLUS  - Business model:  * CRISPR PLUS has been recognized as an advanced technology in that it yields a more than two-fold increase in editing performance, higher editing efficiency and lower off-target effects than existing genetic scissors. G+Flas obtained patents for CRISPR PLUS and registered the trademark in Korea in 2020. And it acquired patents for the technology in Australia in 2021.  * The company has been developing a biobetter version of immunotherapeutic anticancer drugs such as Trastuzumab made in non-GMO plants.  * In February 2021, it has signed a technology transfer agreement to "license in" ERS Genomics' CRISPR-Cas9 technology.	- Revenue: \$0.2M ('20) - Cumulative funding: \$27.5 ('21) - Lead investors: Smilegate Investment, ChongKunDang Holdings, AlpenRoute Asset Management - Valuation: \$166.2M ('21)
7	Mesh Korea	2013	- Core product/service: Vroong logistics management platform and on-demand delivery service - Business model:  * Vroong Transportation Management System (Vroong TMS): Automatic fleet allocation system that enables integrated logistics process control and management  * Vroong Order Management System (Vroong OMS): A single platform for managing orders at different stages from order collection to fulfillment, such as receiving orders from different channels, routing orders, entering store information, and conducting deliveries  * Vroong Real-time Delivery and Vroong Exclusive/Same-day Delivery  * Fulfilment: The company opened its logistics centers equipped with full cold chain system in Gimpo and Namyangju in 2020, serving over 250 clients including KT, Emart and Cookat.	- Revenue: \$61.3M ('18) > \$135.7M ('19) > \$215.5M ('20) - Cumulative number of member stores: 67,000 ('21) - Number of corporate clients: 250 or more ('21) - Cumulative funding: \$147.9M ('21) - Lead investors: KB Investment, KDB Bank, Naver, GS Homeshopping, Hyundai Motor Company - Valuation: \$462M ('21)
8	Barogo	2014	- Core product/service: Last mile logistics platform - Business model: * Barogo provides last mile on-demand delivery services from nearly 1,000 logistics depots across the country. * In December 2020, it formed a joint venture Moving to offer delivery vehicle sharing service. * The company has been carrying out a project to open micro-fulfillment centers (MFCs) in urban logistics hubs. * In August 2021, the Company launched quick commerce (Q-commerce) service called Tengo, which claims 10-minute delivery of essentials using its existing logistics infrastructure.	- Revenue: \$14.8M ('18) > \$38.1M ('19) > \$64.8M ('20) - Estimated market share: 11.9% (Dec.'20) - Number of partner stores: 116,000 ('21) - Cumulative funding: \$100M ('21); Keistone Partners invested \$42M in the company (Jan.'22) - Lead investors: CJ, Delivery Hero, 11st - Valuation: \$294M (Jun.'21)

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No.	Company Name	Founding Year	Business Overview	Key Indicators *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
9	Strad Vision	2014	- Core product/service: Advanced Driver Assistance Systems (ADAS) and SVNet, an Al-based camera perception software - Business model: * SVNet is a lightweight, highly efficient deep learning-based perception solution which has minimum computation requirements and power consumption. The software can be run even on low-cost chipsets, perceiving over 30 different objects based on Al. And it can be used with a combination of any cameras and chipsets, being available on more than 14 platforms. For its camera perception software, Strad Vision achieved internationally-recognized certifications including Europe's ASPICE Level 2 certification, ISO 9001, ISO 26262, ISO 27001, and China's Guobiao certification. * In 2020, the company was selected as a premier member of NVIDIA Inception, and participated in a Level 4 autonomous bus project in Germany.	- Revenue: \$3.7M ('18) > \$4.8M ('19) > \$4.5M ('20) - SVnet has been installed in a cumulative total of 13M vehicles produced by nine global automobile manufacturers as of July 2021 Cumulative funding: \$40.5M ('21) - Lead investors: Hyundai Motor Company, Hyundai Mobis, LG Electronics, Aisin Group, Pegasus Tech Ventures - Valuation: \$252M ('21)
10	Wadiz	2012	- Core product/service: Crowdfunding platform  - Business model:  * The Wadiz platform hosts different types of crowdfunding campaigns such as reward-based crowdfunding, which offers a product in return for financing, and securities-based crowdfunding, which gives funders shares or bonds of a company in return for their investment.  * The company runs an online multi-brand store for products financed through reward-based crowdfunding campaigns.  * In collaboration with Lotte Mart and other major companies, the company rolled out new products and pre-released private label items via its platform.	- Revenue: \$4.3M ('18) > \$12.2M ('19) > \$18.5M ('20)  - Number of members registered: 4M (Nov.'21)  - Cumulative value of intermediated transactions: \$504M (Nov.'21)  - Cumulative funding: \$132.3M ('21)  - Lead investors: KDB Bank, Shinhan Venture Investment, Korea Investment Partners, DS Asset  - Valuation: \$504M ('21)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
11	The Pinkfong Company  * SmartStudy was changed to the current company name in January 2022.	2010	- Core product/service: Kids content such as Pinkfong and Baby Shark - Business model: * The Pinkfong Company provides high quality songs and videos via its mobile app for toddlers and kids that their parents are also satisfied with. Since 2015, it has been offering paid content on its YouTube channels. With kids education programs using characters, it became the top education app in global app stores. The company has been branching out from education to YouTube, film/animation, music, performance, and game. * Using its proprietary IPs, the company has expanded its licensing business into various fields such as toys, clothing, accessories and so on. In 2019, it launched various licensed products in collaboration with WowWee, Hasbro, Cardinal-Spin Master, Crayola, Crocs, Kellogg's and others. * It is preparing to enter webtoon and webnovel markets through a joint venture company and launch a new family sport brand. * The company is setting up the fourth overseas subsidiary in Singapore following those in LA, Shanghai, and Hong Kong.	- Revenue: \$33.6M ('18) > \$64.5M ('19) > \$56.9M ('20) - Cumulative subscribers to the company's YouTube channels: 90M (Jan.'22) - Cumulative funding: \$36.7M ('21) - Lead investors: KDB Bank, Pureun Partners Asset Management, DT Capital - Valuation: \$840M ('21)
12	OTD Corporation	2014	<ul> <li>Core product/service: Space curation and select dining shops (i.e., a collection of famous local restaurants offered in the form of a premium food court)</li> <li>Business model:</li> <li>* OTD Corporation is proactively introducing its brands under the concept of select dining into commercial buildings and retail spaces within office buildings, while planning and operating a new lifestyle platform that offers a variety of eateries and attractions like content.</li> <li>* Examples of its multi-brand restaurant are Over the Dish in Star City Mall near Konkuk University, Power Plant at D Tower, District Y in Yeouido, and Mondrian Seoul Hotel's underground arcade. The company is also working on projects for Shinsegae, Lotte and other companies.</li> <li>* It runs roughly 56 stores including Seongsu Yeonbang shopping complex, which is home to a collection of small brands, curated book store ARC N BOOK, Jeokdang, Thingool Market, Power Plant, Market Locus, Over the Dish, and bakery select shop Dongne Bbangjip (meaning Village Bakery).</li> </ul>	- Revenue: \$20.2M ('18) > \$28.8M ('19) > \$23.4M ('20) - Cumulative funding: \$64.1M ('21) - Lead investors: IS Dongseo, UTC Investment - Valuation: \$420M (Oct.'19)

---- K-Unicorns

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
13	IGAWorks	2006	- Core product/service: Data consulting and data-based marketing platforms such as Data Management Platform (DMP), which analyzes and learns over 1.7B data records per day on average from 35M data sources, Customer Data Platform (CDP), and Advertising Trade Desk (ATD)  - Business model:  * IGAWorks offers mobile data and platform services including mobile attribution, mobile data analytics, marketing automation, DMP, machine learning, Al, trade desk and market intelligence.  * It took over digital advertising company SMART Interactive in 2020, thereby building its data-driven business value chain from start to finish (including all activities related to data, platform, media rep and agency).  * In 2021, the company has launched CDP that enables corporate clients to easily collect, store and analyze their customer data and form a comprehensive view of their customers by aggregating their internal data with external data. Also, it has made a foray into the enterprise digital transformation market.	- Revenue: \$51.2M ('18) > \$70.6M ('19) > \$107.1M ('20) - Ads billing: \$74.8M ('18) > \$175.1M ('19) > \$322M ('20) - Cumulative funding: \$45.8M (Mar.'20) - Lead investors: Korea Investment Partners, Atinum Investment, KB Securities, Mirae Asset Daewoo Securities, InterVest, Softbank Ventures Asia, Premier Partners, SG PE - Valuation: \$1,344M ('21)
14	Sandbox Network	2015	<ul> <li>Core product/service: Multi-channel network that manages content creators and directly produces content</li> <li>Business model:</li> <li>* Sandbox Network manages creators on YouTube, Africa TV, twitch and other platforms. Like existing entertainment companies, it helps creators produce and distribute digital content and manage their IPs while connecting them to advertisers. Currently, it manages over 410 creator teams.</li> <li>* The company has recently been assisting content creators in seeking out international audiences, creating its original content for IP business, and entering the e-sports market.</li> <li>* In 2021, it set up a local entity in China to support the debut of creators in China.</li> </ul>	- Revenue: \$23.7M ('18) > \$51.1M ('19) > \$75.5M ('20) - Sandbox Network creators had 100.007M cumulative subscribers and over 2.6B views in 2020 Cumulative funding: \$76.4M ('21) - Lead investors: NVC Partners, Nexon Korea, KDB Bank - Valuation: \$252M ('20)

				Key Indicators
No.	Company Name	Founding Year	Business Overview	*The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
15	Fresheasy	2016	<ul> <li>Core product/service: Development and delivery of meal kits, one of home meal replacements (HMR)</li> <li>Business model:</li> <li>* Fresheasy is a leading meal kit company capturing a 70% share in the Korean meal kit market. It launched restaurant meal replacement products including 'Century-Old Restaurant' Meal Kits and 63 Dining Kits, in collaboration with hotels and popular restaurants (century-old restaurants refer to restaurants with more than 30 years of history designated by the MSS).</li> <li>* In 2020, the company completed the construction of a HMR factory, manufacturing 500 kinds of products under seven food categories. It produces meal kits under its own brands and OEM or ODM products under other meal kit brands.</li> <li>* Fresheasy acquired Dr. Kitchen, a provider of diabetes-friendly meal delivery service, in 2021, Heo Dak, a producer of over 300 kinds of casual meal replacement items, and Line Logistics System, a logistics company, in 2022.</li> </ul>	- Revenue: \$183.5M ('18) > \$597.9M ('19) > \$1,068M ('20) - Cumulative funding: \$126M ('21) - Lead investors: SoftBank Ventures Asia, NAU IB Capital, NH Bank, Anchor Equity Partners - Valuation: \$168M ('21)
16	LivsMed	2011	<ul> <li>Core product/service: Development and sales of ArtiSential, a multi-DOF articulating laparoscopic instrument</li> <li>Business model:</li> <li>* The company developed and sells ArtiSential, a single-use surgical instrument into which control and action robots are consolidated. ArtiSential can rotate 90 degrees and move up, down, left or right, mimicking the movements of human hands. It has been designated as the 15th innovative medical device in 2021.</li> <li>* ArtiSential was chosen as innovative technology by the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) in 2018. The company officially began selling the instrument to Kaiser Permanente, one of the five largest hospital systems, in the U.S. in December 2020.</li> <li>* ArtiSential is currently being exported to 17 countries including the United Kingdom, France, Australia and Japan. The company signed non-disclosure agreements (NDAs) with major distributors of medical devices abroad.</li> <li>* In 2021, LivsMed rolled out a 3D model of ArtiSential in collaboration with Sometech.</li> </ul>	- Revenue: \$0.2M ('18) > \$0.7M ('19) > \$3.4M ('20) - Cumulative funding: \$34.9M ('20) - Lead investors: Stonebridge Ventures, K2 Investment Partners, Wonik Investment Partners, Mirae Asset Venture Investment - Valuation: Mid to upper \$168M range (Sept.'20)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
17	Takeonecompany	2016	<ul> <li>Core product/service: Cinematic games based on pre-existing films, dramas or webtoons, IP-related ancillary businesses, and original content production</li> <li>Business model:</li> <li>* Takeonecompany's flagship game is BTS World, a mobile simulation game in which players can become the manager of K-pop boy group BTS and embark on a debut journey with BTS.</li> <li>* The company co-produced a drama titled 'L.U.C.A.: The Beginning' with Studio Dragon.</li> <li>* It also produces merchandise, releasing original soundtrack albums, and holding concerts and events.</li> <li>* With six dramas currently under production, it has more than 40 original IPs.</li> </ul>	- Revenue: \$1.3M ('18) > \$8.6M ('19) > \$12M ('20) - Cumulative funding: \$25.2M ('21) - Lead investors: JTBC studios, KDB Bank, SG PE - Valuation: \$84M ('20)
18	Riiid	2014	<ul> <li>Core product/service: Al tutor (EduTech)</li> <li>Business model:</li> <li>Riiid developed core deep learning models for answer correctness prediction, score prediction, and optimal learning path generation. Built upon its deep learning prediction models, it offers Santa TOEIC, a paid online Al tutoring service for students preparing for the Test of English for International Communication (TOEIC).</li> <li>The company is pushing for a flip-up, which involves moving its headquarters to the U.S. and being reincorporated in the U.S.</li> </ul>	- Revenue: \$2M ('18) > \$3.7M ('19) > \$4.7M ('20) - Number of subscribers: 0.32M ('18) > 1.1M ('19) > 1.4M ('20) - Cumulative funding: \$238.6M ('21) - Lead investors: SoftBank Vision Fund, KDB Bank, InterVest, IMM Investment, DSC Investment - Valuation: \$504M ('21)
19	BeMyCar	2013	- Core product/service: Mobility service platform that offers used vehicle information, carsharing, car rentals, etc Business model: * The company provides Auto Concierge service that helps address information asymmetry between suppliers and consumers, and short-term car rental service.	- Revenue: \$16.8M ('18) > \$25.1M ('19) > \$30M ('20) - With 650 business partners, the company's gross merchandise value per month surpassed \$25.2M (Jan.'22) Cumulative funding: \$31.1M ('22) - Lead investors: Shinhan Venture Investment, KDB Bank, Industrial Bank of Korea (IBK), Real Mccoy PE - Valuation: \$126M (Jan.'22)
20	MyRealTrip	2012	- Core product/service: Booking services for international outbound travels, and domestic travel services - Business model: * MyRealTrip is a one-stop-shop travel platform that offers and recommends local tours and activities, hotels, flights and virtual tours, and allows users to book such travel services online. Its revenue comes from commissions on each booking. * The company expands and diversifies its portfolio of tours and activities through partnerships with activity, golf and gourmet platforms.	- Revenue: \$22.2M ('18) > \$30.2M ('19) > \$6M ('20) - Transaction value: \$105M ('18) > \$302.4M ('19) > \$100.8M ('20) - Cumulative funding: \$69.2M - Lead investors: Altos Korea Management Partners, IMM Investment, Smilegate Investment - Valuation: \$176.4M (Jul.'20)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
21	MyMusicTaste	2011	- Core product/service: Concert planning platform based on demand forecasts - Business model:  * MyMusicTaste generates revenue by forecasting demand for concert tickets by artist and region, planning concerts, identifying and promoting promising artists through analysis of growth and patterns in global K-pop fandoms (fan communities), and purchasing long-term public performance rights.  * The COVID-19 pandemic caused the company to turn itself into an online concert platform, running its business both online and offline on top of the existing business model.	- Revenue: \$11M ('18) > \$21.4M ('19) > \$16M ('20) - Number of users: 2.27M ('19) > 2.4M ('20) > 2.7M ('21) - Cumulative funding: \$27.7M - Lead investors: KTB Network, Samsung Venture Investment, SoftBank Ventures Asia
22	Ensol Biosciences	2001	- Core product/service: Medications for degenerative disc disease and arthritis, and bioinformatics - Business model:  * Ensol Biosciences is a biopharmaceutical company that identifies therapeutic targets and new drug candidates based on genome analysis technology, develops new drugs for degenerative disc disease and arthritis, and commercializes drug candidates.  * The company is preparing move to the second-tier KOSDAQ from the KONEX for startups and venture firms in 2022.	- Revenue: \$0.3M ('18) > \$0.4M ('19) > \$0.5M ('20) - Cumulative funding: \$43M ('21) - Lead investors: Yuhan, Tiger Asset Management Discretionary Investment - Valuation: \$114.6M (Mar.'22)
23	Watcha	2011	<ul> <li>Core product/service: OTT service Watcha Play</li> <li>Business model:</li> <li>* Watcha offers a monthly subscription VOD service (OTT), which features content recommendation based on user preferences.</li> <li>* It strives to become a comprehensive online subscription entertainment platform by entering the markets for music streaming, webtoons, and NFTs with the launch of Watch 2.0.</li> <li>* The company plans to release 20 or more new originals in 2022 to enhance its original content.</li> </ul>	- Revenue: \$9.4M ('18) > \$18.2M ('19) > \$31.7M ('20) - Number of subscribers: 0.25M ('19) > 0.5M ('20) > 1.51M ('21) - Cumulative app downloads exceeded 10M as of January 2021 Cumulative funding: \$49.6M - Lead investors: Atinum Investment, Company K Partners, Kakao Ventures, eBEST Investment & Securities - Valuation: \$84M (Dec.'20)
24	Plasmapp	2015	<ul> <li>Core product/service: Plasma sterilizers for medical applications</li> <li>Business model:</li> <li>* Plasmapp developed and produces medical sterilization devices and pouches on the basis of low temperature/atmospheric pressure plasma technology. Its products are being exported to over 60 countries.</li> <li>* The company sells STERLINK, an affordable solution for quick and low temperature sterilization, primarily to small and medium-sized clinics and hospitals.</li> <li>* It has recently developed ACTLINK, which disinfects, regenerates and activates dental implant surfaces. Together with existing plasma sterilizer lines, the new product is expected to boost the company's revenue.</li> </ul>	- Revenue: \$2M ('18) > \$2.1M ('19) > \$2.8M ('20) - Cumulative funding: \$36.1M ('21) - Lead investors: KDB Bank, LB Investment, KTB Network, Stonebridge Ventures - Valuation: \$84M (Aug.'21)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
25	Backpackr	2012	- Core product/service: iDus, an ecommerce platform for handmade goods - Business model:  * Backpackr provides an online marketplace platform iDus for handmade products, offering online craft classes and workshops via its platform, and running offline stores for handicrafts. Its revenue comes mainly from commissions handmade sellers pay on each item sold.  * There were nearly 25,000 crafters (sellers) running their shops on the platform and listing more than 330,000 arts and crafts as of 2021.  * To boost customer loyalty, the company makes use of fandom marketing by helping its crafters (sellers) become popular influencers and sell their crafts to fans.	- Revenue: \$8.1M ('18) > \$19.2M ('19) > \$34.9M ('20) - Cumulative downloads surpassed 13M and cumulative transaction value hit KRW 500B in 2021 Cumulative funding: \$42.8M ('21) - Lead investors: Stonebridge Ventures, IMM Investment, Mirae Asset Venture Investment - Valuation: \$168M (Jun.'20)
26	Healcerion	2012	<ul> <li>Core product/service: Compact portable ultrasound devices that can be connected to smart devices</li> <li>Business model:</li> <li>Healcerion exports ultrasound diagnostic devices, which can be synced with smartphones using its app, to over 40 countries.</li> <li>Its devices are lightweight and affordable, costing just one-tenth the price of conventional ultrasound devices.</li> <li>The company is diversifying its business by developing an AI-driven healthcare data platform.</li> <li>It is preparing for an IPO in 2022.</li> </ul>	- Revenue: \$3.5M ('18) > \$2.5M ('19) > \$2.6M ('20) - Cumulative funding: \$17.9M - Lead investors: SoftBank Ventures Asia, InterVest, G.N. Tech Venture Capital, Magellan Technology Investment, Korea SMEs and Startups Agency (KOSME) - Valuation: \$44.5M ('19)
27	ABLY Corp	2015	- Core product/service: Influencer ecommerce platform ABLY - Business model:  * The company provides an aggregator app for online stores run by micro influencers to sell fashion, home deco or beauty items. It offers Al-driven personalized recommendation service that connects different styles of products to users based on their preferences through big data analysis.  * What makes ABLY distinctive is that the company handles buying, shipping, customer service, product exchange, returns and so on for its sellers in order for anyone to easily start business and open his or her shop on the platform.	- Revenue: \$12.5M ('18) > \$26.5M ('19) > \$44.2M ('20) - Cumulative downloads: 7M ('19) > 16M ('20) > 28M ('21) - Cumulative transaction value has surpassed KRW 1T in four years since the launch of ABLY in March 2018 Cumulative funding: \$145.3M (Jan.'22) - Lead investors: LB Investment, SV investment, KDB Bank, Kolon Investment - Valuation: \$756M (Jan.'22)
28	J2HBiotech	2014	<ul> <li>Core product/service: Drug development for intractable diseases</li> <li>Business model:</li> <li>* J2HBiotech develops therapeutics for the treatment of liver diseases, such as non-alcoholic liver disease and liver cancer, with compound optimization technology and 3D cell culture screening technology.</li> </ul>	- Revenue: \$2.7M ('18) > \$5.2M ('19) > \$2.5M ('20) - Cumulative funding: \$49.6M (Jul.'21) - Lead investors: IMM Investment, KB Investment, KTB Network, Aju IB Investment - Valuation: \$126M (Dec.'20.)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
29	NeoLAB Convergence	2009	<ul> <li>Core product/service: Remote learning solution</li> <li>Business model:</li> <li>NeoLAB Convergence offers a remote learning solution that comes with a smartpen, and Gridaboard, a digital board for which its smartpen can be paired with any smart device or computer.</li> <li>The company rolled out a new smartpen called LAMY Safari All Black Ncode in collaboration with LAMY.</li> <li>It offers Smart Class Kit that allows users to create educational content using a smartphone and a smartpen.</li> </ul>	- Revenue: \$26M ('18) > \$17.1M ('19) > \$19.3M ('20) - Cumulative funding: \$6.7M - Lead investors: JNT Investment, Seoul Investment Partners, Korea Investment Partners, KTB Network - Valuation: \$17.2M
30	Dalcomsoft	2014	<ul> <li>Core product/service: Online/mobile game software development</li> <li>Business model:</li> <li>* Dalcomsoft produces music rhythm games on smartphones using songs of famous artists such as BTS. It generates revenue by applying music IPs to mobile platforms.</li> <li>* Together with Wemade and blockchain platform WEMIX, the company has kicked off blockchain-based game business in the second half of 2021.</li> </ul>	- Revenue: \$15.1M ('18) > \$10.1M ('19) > \$11.9M ('20) - Cumulative funding: \$25.2M ('21) - Lead investors: LEO Partners Investment, Ascendo Ventures - Valuation: \$35.5M
31	Mula	2011	- Core product/service: Athleisure clothing brand MULAWEAR - Business model:  * Mula sells athleisure wear-workout clothes worn as everyday wear-for men and women through D2C Mall. It is expanding sales channels offline.  * The company has been diversifying its customer base by offering discounted products for product trials and launching premium product lines.	- Revenue: \$12.8M ('18) > \$24.9M ('19) > \$38.1M ('20) - Average monthly visitors to the online shopping site: Approx. 1M (Feb.'22) - Cumulative funding: \$10.1M (Jan.'20) - Lead investors: STIC Ventures, SBI Investment, LB Investment
32	Baram International	2014	<ul> <li>Core product/service: Vegan beauty brand Dear Dahlia</li> <li>Business model:</li> <li>* Baram International owns a vegan beauty brand that offers products having no animal ingredients.</li> <li>* The company boasts a key ingredient derived from Dahlias and luxurious design packaging with marble patterns, which set Dear Dahlia's products apart from other products.</li> <li>* In 2014, it began as a cosmetics distributor of 3CE and Unilever for the Chinese market. In 2017, the company launched its own brand Dear Dahlia, increasing its presence locally and globally by opening its stores in major department stores in and outside of Korea.</li> </ul>	- Revenue: \$11.3M ('18) > \$20.9M ('19) > \$53.4M ('20) - Cumulative funding: \$35.7M (Feb.'22) - Lead investors: LB Investment, QUAD Investment Management, AmorePacific Group - Valuation: \$72.2M (Jul.'20)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
33	DS Global	2010	<ul> <li>Core product/service: Portable photo printers</li> <li>Business model:</li> <li>DS Global produces portable instant photo printers and instant cameras.</li> <li>It rolled out nail sticker printer NAILPOP to make inroads into the beauty tech market and won the CES 2020 Innovation Award.</li> </ul>	- Revenue: \$70.8M ('18) > \$50.7M ('19) > \$35.6M ('20) - Cumulative funding: \$3.8M ('17) - Lead investors: IBK, KOTEC, KDB Bank, KB Investment
34	ETS	2012	- Core product/service: Secondary battery equipment and system - Business model:  * Secondary battery system business, which produces polymer batteries and prismatic cells for electric vehicles (EV) and IT applications  * GLASS business, which develops and manufactures glass used for mobile camera protector  * F.A business, which focuses on developing automation system and robot system	- Revenue: \$26.4M ('18) > \$35.4M ('19) > \$22.8M ('20) - Lead investors: HB Investment, KB Securities
35	Weddingbook	2014	- Core product/service: Wedding planning platform Wedding Book - Business model:  * The Wedding Book app helps users find and book the best wedding vendors including wedding photographers and wedding dress boutiques.  * The company also provides WeddingBook Biz (ERP system) for wedding vendors.  * It opened and operates its flagship offline store Weddingbook Cheongdam that provides customers with opportunities to experience all items related to wedding preparations.	- Revenue: \$0.9M ('18) > \$2.2M ('19) > \$5.7M ('20)  - Wedding Book has about 100,000 cumulative reviews, nearly 10,000 registered vendors and 350,000 cumulative subscribers.  - Cumulative funding: \$14.1M ('20)  - Lead investors: SV Investment, KDB Bank
36	Neuromeka	2013	<ul> <li>Core product/service: Collaborative robotic automation platform</li> <li>Business model:</li> <li>Neuromeka is primarily engaged in robotic automation platform business; production and sales of collaborative robots (cobots).</li> <li>Indy: Neuromeka's flagship cobot model, which can be used in coffee-making (robot baristas) or food services (robot food servers).</li> <li>Moby: Autonomous mobile robot with a robot arm manipulator, which can be used for delivery, patrol, quarantine, and guidance.</li> </ul>	- Revenue: \$2.6M ('18) > \$6M ('19) > \$3.4M ('20) - Cumulative funding: \$34.4M (Aug.'21) - Lead investors: DSC Investment, One Asset Management, KDB Bank, IBK - Valuation: \$60.5M (Jun.'20)
37	SemiFive	2019	- Core product/service: System-on-Chip (SoC) design platform - Business model:  * SemiFive provides fast, low cost access to custom SoC design using its SoC design platform based on RISC-V, which is opensource semiconductor design technology.  * The company works closely with Samsung Foundry and strives to become the 'ARM of Korea.'	- Revenue: \$0.8M ('19) > \$1.6M ('20) - Cumulative funding: \$142.8M (Feb.'22) - Lead investors: Korea Investment Partners, Mirae Asset Venture Investment, KDB Bank - Valuation: \$420M (Feb.'22)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
38	SAMG Entertainment	2000	- Core product/service: Animation IP creator - Business model:  * SAMG Entertainment is a producer of animation IPs like Lady Bug, Catch Tiniping, Monkart, and Mini Force: Super Dino Power.  * Lady Bug took the top spot in the weekly TOP 10 on Disney Plus in Latin America.  * Mini Force gained 23B cumulative views on Chinese platforms including Tencent and iQiyi and pulled in over 11.1B views on YouTube.  * Its game app surpassed 4.5M in cumulative downloads.  * The company is preparing for its debut on the KOSDAQ in the second half of 2022.	- Revenue: \$16.5M ('18) > \$16.7M ('19) > \$19.8M ('20) - Cumulative funding: \$27.7M ('21) - Lead investors: Excelsior Capital Asia, NH Investment & Securities, SangSang Ventures
39	AIMT	2016	<ul> <li>Core product/service: Highly efficient vacuum insulation materials</li> <li>Business model:</li> <li>* AIMT manufactures vacuum insulation materials that are environment-friendly compared to Styrofoam packaging materials and use no refrigerants.</li> <li>* It produces cooling/heating boxes made from 100% PET.</li> <li>* The company currently manufactures and furnishes Fresh Bags used in Rocket Fresh Delivery service for Coupang (0.5-0.8M bags per year).</li> <li>* AIMT also has its strong presence in the pharmaceutical delivery sector, providing vacuum insulation panels for temperature controlled packaging used in delivering pharmaceutical products, such as vaccines, blood, blood plasma, and samples.</li> </ul>	- Revenue: \$2.9M ('18) > \$4.6M ('19) > \$13.5M ('20) - Cumulative funding: \$6.7M (Dec.'20) - Lead investors: Enlight Ventures, Samsung Venture Investment, Lotte Accelerator
40	Healingpaper	2012	<ul> <li>Core product/service: Medical aesthetics app Gangnam Unni</li> <li>Business model:</li> <li>* There are about 1,700 plastic surgery clinics, dermatologic clinics and aesthetic clinics registered with the platform. Users share their clinical experiences and reviews via the app.</li> <li>* The company made inroads into the Japanese market in 2020. Non-Korean users account for 10% of 2M monthly active users (MAU).</li> <li>* Its app ranked first in Japan by number of registered medical aesthetic clinics.</li> </ul>	- Revenue: \$3.7M ('18) > \$7.1M ('19) > \$10.1M ('20) - Number of leads who resulted in consultations with clinics: 0.2M ('18) > 0.5M ('19) > 1M ('20) - There were more than 500 local clinics in Japan registered on the Gangnam Unni app (Aug.'21) Cumulative funding: \$19.6M ('21) - Lead investors: Legend Capital, KB Investment, Hana Ventures - Valuation: \$21M ('19)
41	Agencomm	2014	- Core product/service: Integrated circuit (IC) substrates - Business model:  * The company manufactures IC substrates embedded in USIM, credit cards, passports, etc.	- Revenue: \$6.1M ('18) > \$6.8M ('19) > \$6.9M ('20) - Lead investors: Magna Investment, K Bridge Investment

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
42	this is engineering Inc. (TIE)	2016	- Core product/service: Drone package SHIFT RED - Business model: * TIE produces drones equipped with flight control system as core technology. Its flagship product is a drone package called SHIFT RED with one-hand, intuitive controlling modes. Also, the company has hovering technology that allows flying devices to stay airborne. * The company has domestic and foreign technology patents (five from Korea and two from abroad). * It has signed an MOU with Gangwon Province for a KRW 27.1B drone tax development project in March 2021.	- Revenue: \$0.4M ('20) - Cumulative funding: \$10.1M ('21) - Lead investors: KDB Bank, SBI Investment, Korea Investment Partners
43	iMedisync	2012	- Core product/service: Al-powered automated EEG analysis solution - Business model: * iMedisync's core product is iSyncBrain MCI Classifier, which analyzes electroencephalographic (EEG) signals for the classification of mild cognitive impairment (MCI) and presents the probability of MCI with the use of Al algorithms. iSyncBrain MCI Classifier attained medical device certification (Class II) from the Ministry of Food and Drug Safety in 2020. * The company completed the development of iSyncHeart, a heart rate variability analysis solution, in 2020. * It seeks to diversify into non-healthcare businesses (metaverse, edutech, HR solution, etc.) going forward.	- Revenue: \$0.1M ('19) > \$0.2M ('20) > \$1.4M ('21) - Cumulative funding: \$13.9M ('22) - Lead investors: KDB Bank, A Ventures - Valuation: \$117.6M ('22)
44	Channel Corporation	2014	<ul> <li>Core product/service: Online messenger Channel Talk for customer support (B2B SaaS)</li> <li>Business model:</li> <li>* Channel Corporation provides software tools for online businesses to support customers through messenger chats.</li> <li>* Additionally, it offers targeted marketing service backed by its customer management software tool, and internal instant messaging service for businesses.</li> <li>* The company serves more than 70,000 firms in 22 countries. Japan in particular made up 17% of the company's revenues from overseas markets (as of February 2022).</li> <li>* It plans to foray into the North American markets in 2022.</li> </ul>	<ul> <li>Revenue: \$1M ('18) &gt; \$1.9M ('19) &gt; \$2.8M ('20)</li> <li>Cumulative funding: \$33.6M (Sept.'21)</li> <li>Services being currently offered to over 70,000 firms in 22 countries as of February 2022.</li> <li>Lead investors: Atinum Investment, KB Investment, BonAngels Venture Partners</li> </ul>

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (₩1,190.50/\$) as of December 31, 2021.
45	Farm8	2004	- Core product/service: Smart farm - Business model:  * Farm8 grows over 150 kinds of salad vegetables in indoor vertical farms using technologies, such as AI, Internet of Things (IoT) and big data, selling nearly 65,000 salad kits per day (30 tons of salad greens). It provides vegetables to big F&B chains including Subway, Burger King and Starbucks.  * The company split off PLANTFARM specialized in the installment and construction of smart farm facilities.  * It operates Metro Farms, indoor vertical smart farms using idle underground spaces at five subway stations, together with Seoul Metropolitan Government and Seoul Metro.	- Revenue: \$37M ('18) > \$39.7M ('19) > 44.7M ('20) - Cumulative funding: \$24.4M ('21) - Lead investors: IMM Investment, KDB Bank, Kooksoondang Brewery - Valuation: \$67.2M ('21)
46	Dxome	2017	<ul> <li>Core product/service: Next-generation sequencing (NGS) tests used in cancer diagnosis</li> <li>Business model:</li> <li>* Dxome pursues to obtain a Clinical Laboratory Improvement Amendments (CLIA) certificate for its laboratory from the U.S. in relation to genetic testing for cancer.</li> <li>* The company's testing products are currently used by large tertiary hospitals, including Severance Hospital, Asan Medical Center, and Kangbuk Samsung Medical Center, across the country.</li> <li>* Dxome has participated as an exhibitor to present its reagents for genetic testing in MEDICA 2021.</li> </ul>	- Revenue: \$0.5M ('18) > \$1.5M ('19) > \$5.3M ('20) - Cumulative funding: \$11.8M ('21) - Lead investors: KDB Bank, Aju IB Investment, SV Investment, Kiwoom Investment
47	Lemonex	2013	<ul> <li>Core product/service: RNA-based gene therapy products and anti-cancer immunotherapy drugs</li> <li>Business model:</li> <li>* Lemonex develops mRNA vaccines, small interfering RNA (siRNA)-based gene therapy drugs, anti-cancer immunotherapy drugs and more by tapping into its proprietary drug delivery technology DegradaBALL®.</li> <li>* The company has obtained patents for DegradaBALL® from competent authorities in Korea, the U.S., Japan, Australia, and other countries.</li> </ul>	- Cumulative funding: \$25.6M (Apr.'21) - Lead investors: Daekyo Investment, Union Investment Partners, L&S Venture Capital, Smilegate Investment, IBK - Valuation: \$168 ('21)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
48	Law&Company	2012	- Core product/service: Legal platform LawTalk and LawTalk News - Business model:  * Law&Company's legal platform offers legal counseling services by connecting clients to lawyers.  * The company doesn't receive any fees on the service that helps clients find their lawyers. Its primary source of revenue is advertising fees lawyers pay.  * It has launched AI-based legal information search service in the second half of 2021.  * The legal tech company has launched Allawyers, a free service for lawyer career development, to provide its member lawyers with job openings and career mentoring.	- Revenue: \$0.5M ('18) > \$0.7M ('19) > \$2.5M ('20) > \$3.4M ('21) - Cumulative funding: \$33.6M ('22) - The online legal service platform has approximately 21.7M cumulative users and roughly 0.97M average monthly visitors while providing 0.64M cumulative counseling services and about 23,000 legal aid and counseling services each month on average Lead investors: Coolidge Corner Investment, DSC Investment, Daekyo Investment
49	ROKIT Healthcare	2012	- Core product/service: Organ regeneration platform using bioprinting - Business model: * ROKIT Healthcare developed the world's first 3D bioprinter called INVIVO in 2016. * The company formed a partnership with global pharmaceutical company Merck, selling bioinks HumaTein and INVIVO GEL in global markets. HumaTein is a human cell-derived extracellular matrix (ECM) the company developed. * It has been awarded cumulative distribution contracts worth more than KRW 2T worldwide since November 2020 to date, with the addition of new contracts from Brazil, Thailand and the Philippines. * Its paper has been accepted for publication at the Conference on Computer Vision and Pattern Recognition (CVPR), the premier international computer vision event.	- Revenue: \$1.9M ('18) > \$8.7M ('19) > \$2.8M ('20) - Cumulative funding: \$28.9M ('21) - Lead investors: DS Investment, GMB Investment, Hana Financial Investment, Shinhan Investment - Valuation: \$142.8M (Jul.'20)
50	Retail&Insight	2019	<ul> <li>Core product/service: Integrated food distribution platform</li> <li>Business model:</li> <li>Retail&amp;Insight operates the nation's number one grocery delivery platform FreshMan, which serves customers with products from local marts.</li> <li>The company launched next generation, cloud-based all-in-one solution Tomato Solution for small and medium-sized local marts.</li> <li>It is preparing for the rollout of Tomato TRADE, a B2B platform that will connect local marts with suppliers nationwide.</li> <li>The company developed smart store solutions such as self-order kiosks, smart carts, and unmanned store system.</li> <li>Retail&amp;Insight released Tomato Solution 1.5 in December 2021, implementing the new version of the solution in franchise companies including Zikooin Market and Weather.</li> </ul>	- Revenue: \$0.5M ('19) > \$9.8M ('20) - Cumulative funding: \$8.4M ('21) - Lead investors: K2 Investment Partners, Kiwoom Securities, M Capital

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
51	Linkflow	2016	- Core product/service: Wearable 360-degree camera - Business model: * Linkflow's main products are wearable neckband cameras NEXX360 and FITT360, both of which support 360-degree live streaming. * The company plans to supply its products to Wuhan, China for telehealth and virtual visit applications. * It has over 20 domestic and foreign technology patents for wearable devices, video processing methods and others. * While the company provides its security products to more than 40 local governments, it has inked an MOU with Hanwha Systems to provide video stitching technology for Redback advanced infantry fighting vehicle. * Linkflow has developed wearable 5G neckband cameras NEXX360 and NEXX ONE that enable real-time transmission of large 360-degree videos through e-Um 5G (private 5G network).	- Revenue: \$1M ('19) > \$0.7M ('20) > \$0.4M (Jun.'21) - Cumulative funding: \$19.5M ('21) - Lead investors: JB Asset Management, NH Investment & Securities, Starquest Asset Management, Albatross Investment Capital - Valuation: \$50.4M (Apr.'20)
52	Mediquitous	2016	- Core product/service: Health, beauty and fashion products - Business model:  * Mediquitous offers a range of products under the brand names of Mahagrid (street casual clothing), Dr.Liv (dietary supplements), slowlab (daily necessities), nodust (anti-pollution products), Barudak (ready-to-eat chicken breasts), and Vitalhealth (health and beauty solution).  * The company operates fashion shopping app NUGU in Japan.  * It has acquired Japanese media content producer TOKYO SCENE.	- Revenue: \$14.2M ('18) > \$19M ('19) > \$44.8M ('20) - Cumulative funding: \$26.9M ('21) - Lead investors: KDB Bank, The Wells Investment
53	Musicow	2016	- Core product/service: Music copyright trading platform - Business model: * The platform allows music creators such as singers, songwriters and lyricists to slice up their copyrights to recorded music and put part of them up for sale by auction, as with shares, while it enables investors to bid on and buy a fractional ownership in song copyrights and receive royalties for the share of copyrights they own. * Musicow is likely to branch out into content IPs and grow into a global IP funding platform. * The company applied for patents for auction of music copyrights, slice sales of music copyrights, and system and methods to purchase music copyrights.	- Revenue: \$2.4M ('18) > \$4.1M ('19) > \$10.8M ('20) - Cumulative funding: \$28.6M ('21) - With over 1,100 songs traded on the platform, cumulative transaction value and subscribers exceeded \$285.5M and 1M, respectively, as of February 15, 2022 Lead investors: KDB Bank, Hanwha Asset Management, LB Investment, Premier Partners

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
54	ВУ4М	2017	<ul> <li>Core product/service: Entertainment, ecommerce, content, advertising agency, etc.</li> <li>Business model:</li> <li>* BY4M launched its private label brands, such as Teatreat, Igomooko, and Foodyt, and sold over 8.7M products in nearly a year.</li> <li>* The music IP division of the company's Entertainment Business Segment produced several hits in a row under its song projects.</li> <li>* The company has diversified into areas like entertainment, publishing and webtoon, on the back of its data-based marketing edges in the field of new media such as social networking services (SNS) and OTT streaming services.</li> <li>* It has launched chicken franchise Dangchiddaeng in January 2021, opening 60 franchised stores across the nation.</li> </ul>	- Revenue: \$16.8M ('19) > \$26.9M ('20) - Cumulative funding: \$18.3M ('21) - Lead investors: F&F Partners, Gravity Private Equity, E&Investment - Valuation: \$134.4M ('21)
55	Cellatoz Therapeutics	2017	- Core product/service: Cell therapies - Business model: * The biotech company has been committed to research and development of CLZ-1001, a cell therapy for the regeneration of bones and cartilages using musculoskeletal stem cells (MSSCs), CLZ-2002 for the treatment of Charcot-Marie-Tooth (CMT) disease using tonsil MSC-derived Schwann cells, and CLZ-3001, an autologous natural killer cell therapy for cancer (as adjuvant therapy). * The U.S. Food and Drug Administration (FDA) granted orphan-drug designation to CLZ-2002, the cell therapy for CMT disease.	- Cumulative funding: \$18.5M (Apr.'21) - Lead investors: The Wells Investment, IHU Investment, SL Investment, Timewise Investment - Valuation: \$100.8M (Apr.'21)
56	Socialbean	2013	<ul> <li>Core product/service: Influencer commerce platform</li> <li>Business model:</li> <li>Socialbean operates HOTT, an ecommerce platform that provides influencers' reviews on products. More than 9,000 influencers are on the platform.</li> <li>The company offers more than 65 products under 11 private label brands including Normal Life, KAKADU, and Nimom Naemom.</li> <li>It has acquired baby shoes manufacturer Wild Cat in 2021.</li> </ul>	- Revenue: \$1.1M ('18) > \$3.4M ('19) > \$11.5M ('20) - Cumulative funding: \$13.9M ('21) - Lead investors: Kakao Ventures, Platinum Technology Investment, KDB Bank, Shinhan Investment

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
57	OurBox	2017	- Core product/service: Fulfilment services for online shopping malls - Business model:  * OurBox is an ecommerce fulfilment provider. The company continues to move toward becoming a business process outsourcing (BPO) company by putting systems in place for order management and warehouse management, building and operating an ecommerce center for its clients, and launching logistics consulting service.  * Recent connection of systems between the company and Naver provides the company with growth opportunities targeting Naver Smartstore sellers, while it enables Naver to offer cold chain solutions for fulfilment services to its Smartstore sellers.	- Revenue: \$4M ('19) > \$11M ('20) - Cumulative funding: \$8.4M (Aug.'20) - Lead investors: SV Investment, Naver, Halla Holdings, A-Ventures, IBK - Valuation: \$84M
58	SMLAB	2018	<ul> <li>Core product/service: Positive electrodes for secondary batteries</li> <li>Business model:</li> <li>* SMLAB developed Ni98 NCMA, positive electrode material containing 98% nickel and less than 1% cobalt.</li> <li>* The company has the technology to massproduce single crystal positive electrodes, which contain more than 83% nickel, without applying the washing process.</li> <li>* It has succeeded in mass production of Ni98 NCMA.</li> <li>* SMLAB has become the first company in the world to develop cobalt-free single crystal positive electrodes, which contain manganese and nickel only, and enable a more than two-fold increase in battery energy density compared to lithium iron phosphate (LiFePO4 or LFP).</li> </ul>	- Revenue: \$0.1M ('19) > \$0.1M ('20) - Cumulative funding: \$91.6M ('21) - Lead investors: Korea Investment Partners, KT&G, Widwin Investment, Hanyang Securities, K& Investment Partners, Murex Partners, SV Investment, KTB Network - Valuation: \$33M (Dec.'21)
59	Xcell Therapeutics	2015	<ul> <li>Core product/service: Serum-free chemically defined media for hMSCs</li> <li>Business model:</li> <li>* Xcell Therapeutics developed the world's first serum-free chemically defined media for human mesenchymal stem cells (hMSCs) in compliance with current good manufacturing practices (cGMP).</li> <li>* The company has a plan to make its highly efficient Customized &amp; Applicated Medium Platform (CAMP) more sophisticated with the funding it raised.</li> <li>* It has become a beneficiary of the bioventure incubation program run by the Innovative Enterprise Cooperation Center at the Korea Institute of Science and Technology (KIST).</li> <li>* The company obtained New Excellent Product (NEP) Certification for cell culture media CellCor from the government.</li> </ul>	- Revenue: \$0.1M ('19) > \$0.5M ('20) - Cumulative funding: \$28.3M (Mar.'21) - Lead investors: KDB Bank, Korea Investment Partners, IBK, DADAM Investment, L&S Venture Capital, LEO Partners Investment - Valuation: \$46.2M (Mar.'21)

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
60	Ngelgames	2013	- Core product/service: Mobile game software - Business model:  * Ngelgames garnered KRW 6B in sales revenue in just six months from its flagship mobile game Lord of Dice, which it took three years to develop, after the game release.  * Hero Cantare came on top of popular games after its official release in Taiwan and Japan. The game's sales revenue hit KRW 10B in just eight months in North America.  * Four new games, including strategy game Miracle Pendion and action role-playing game (RPG) Project Arena, are due to be released in and out of Korea.  * The company signed an MOU with Wemade to onboard its games on Wemade's platform WEMIX.  * Ngelgames is getting ready to release mobile RPG Tower of God M, which is based on webtoon Tower of God with 4.5B cumulative views, and action adventure mobile game Wonderus: The Arena.	- Revenue: \$1.9M ('18) > \$12.3M ('20) - Cumulative revenue: \$12.6M from Lord of Dice; \$16.8M from Hero Cantare - Lead investors: Enlight Ventures, Songhyun Investment
61	Jason Group	2004	<ul> <li>Core product/service: Ecommerce (online &amp; mobile) platform</li> <li>Business model:</li> <li>* Jason Group provides shopping apps Market09, Sale09, and Simsale.</li> <li>* The company launched live streaming shopping events on Simsale, following the development of its own live commerce app and the set-up of in-house streaming studio.</li> <li>* It has conducted live shopping streams simultaneously on its three apps in November 2021.</li> </ul>	- Revenue: \$46.8M ('18) > \$66.5M ('19) > \$72.2M ('20) - Cumulative number of three apps' downloads: 14M (Oct.'20) - Cumulative funding: \$25.2M('20) - Lead investors: Kakao Ventures
62	Clovergames	2018	<ul> <li>Core product/service: Mobile game software</li> <li>Business model:</li> <li>* Clovergames released Road of Heroes in 2020 and won a grand prize at the Korea Game Awards 2020.</li> <li>* The company launched a joint business relationship (joint business plan) with Google in the areas of Google Ads, Google AdMob, and others.</li> <li>* It has opened up global pre-registration for It's Me (#Me), a new life simulation game, in 135 countries in March 2022.</li> </ul>	- Revenue: \$17.9M ('20) - Cumulative funding: \$8.4M ('18) - Lead investors: Hastings Asset Management, DSC Investment

No.	Company Name	Founding Year	Business Overview	Key Indicators  *The figures in US dollars below are based on market average KRW/USD exchange rate (#1,190.50/\$) as of December 31, 2021.
63	Twinny	2015	- Core product/service: Al-based autonomous mobile robot - Business model:  * Twinny launched autonomous mobile robot NarGo and target-following robot TarGo in 2019.  * The company is preparing for the rollout of new robot JalTarGo equipped with target following, autonomous driving and path following features.  * It provides autonomous robot platform TARP.  * Twinny obtained AA Inno-Biz certification and TI-2 (excellent) from a technology credit bureau.	- Revenue: \$0.3M ('18) > \$1.1M ('19) > \$1.3M ('20) - Cumulative funding: \$20.2M ('21) - Lead investors: Mirae Asset Securities, LOG Investment, IBK Capital, YG Investment - Valuation: \$92.4M ('21)
64	Teamfresh	2018	- Core product/service: Cold chain logistics service - Business model:  * Teamfresh is a provider of allencompassing cold chain platform services from freight forwarding, early morning delivery, and fulfilment to grocery service (food supply).  * It has over 200 ecommerce customers including eBay Korea, Rankingdak.com, and Brandi.  * The company plans to use the funding it raised to expand its logistics center.	- Revenue: \$2.3M ('18) > \$12.3M ('19) > \$33.3M ('20) - Cumulative funding: \$55.4M (Sept.'21) - Lead investors: KTB Network, DSC Investment, TS Investment, K2 Investment Partners, Kolon Investment, ipartners Investment, STIC Ventures - Valuation: \$134.4M (Sept.'21)
65	FitPet	2017	<ul> <li>Core product/service: Healthcare solution for companion animals</li> <li>Business model:</li> <li>* FitPet started its business with mobile pet health check-up test kit called Ahead in 2017 and has continued to expand with the addition of online ecommerce FitPetMall and animal hospital platform Hospital Search.</li> <li>* It launched pet insurance service Ahead Care in 2021.</li> <li>* The company was granted a patent on video processing technology in connection with Ahead Basic, and released Ahead Dental, a test kit for the detection of periodontal diseases in companion animals using cotton swabs.</li> <li>* FitPet plans to roll out a fecal occult blood (FOB) test kit for companion animals in the first half of 2022.</li> <li>* It plans to establish a pet insurance company in 2023.</li> </ul>	- Revenue: \$0.4M ('18) > \$6.5M ('19) > \$16.9M ('20) - Cumulative funding: \$25.2M (Jun.'21) - Lead investors: Mirae Asset Capital, LB Investment, Premier Partners, LSK Investment

# Market Watch

Korea Venture Investment Corporation's Semi-Annual Journal

