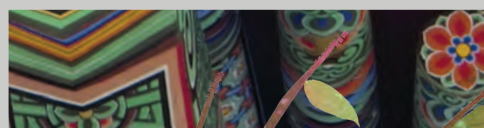


MARKET WATCH

Korea Venture Investment Corporation
Semi-Annual Journal

INTERNATIONAL EDITION
2H 2020
VOL.04



**AN INTRODUCTION TO KVIC &
KOREA FUND OF FUNDS**

**1H2020 KOREAN VC
INDUSTRY AT A GLANCE**

1H2020 KOREA FUND OF FUNDS:
Trends in Fundraising,
Investments and Exits

**1H2020 KFOF
INVESTMENTS BY INDUSTRY**

**ANALYSIS OF UNICORNS
AND UNICORN CANDIDATES
IN KOREA**

K-UNICORNS:
(1) Dable
(2) Backpackr



Korea Venture Investment Corp

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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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**AN
INTRODUCTION
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Market Watch



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

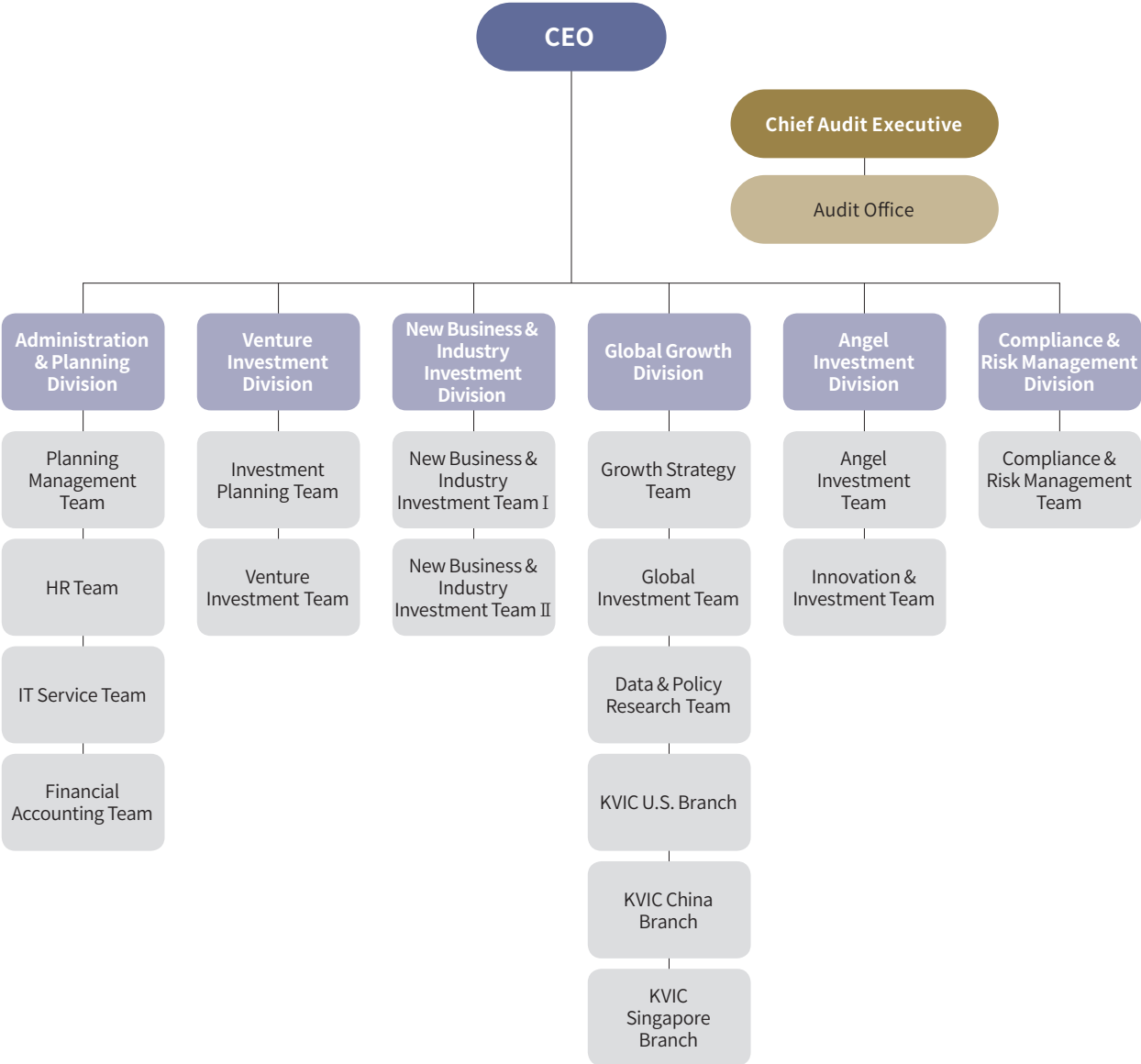
2020	August	KVIC has become a statutory organization with the enactment of the Venture Investment Promotion Act on February 11, 2020 (and the enforcement thereof on August 12, 2020).
2019	September	The Ministry of Land, Infrastructure and Transport became a limited partner (LP) in Korea Fund of Funds (KFoF).
	January	The Ministry of Oceans and Fisheries became an LP in KFoF.
2018	December	KVIC introduced new base bylaws for investee funds.
	August	Job Creation Scale-Up Fund was formed with USD 42 million (KRW 50.6 billion) in capital commitments.
	August	Hana-KVIC Fund was created with USD 92 million (KRW 110 billion) in capital commitments.
	June	KFoF raised aggregate capital commitments totaling USD 3,331 million (KRW 4 trillion) on a cumulative basis.
2017	August	KFoF's cumulative commitments totaled USD 2,499 million (KRW 3 trillion).
	May	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).
	June	Cumulative commitments to Foreign VC Investment Fund reached USD 833 million (KRW 1 trillion).
	August	KVIC opened its Korea Venture Investment Center in Singapore (KVIC Singapore Branch).
2015	May	KFoF's cumulative commitments stood at USD 1,666 million (KRW 2 trillion).
	January	Korea Sports Promotion Foundation (KSPO) became 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.
	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 USD 25 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 stood at USD 833 million (KRW 1 trillion).
	June	The Ministry of Culture, Sports and Tourism participated as an LP in KFoF.
2006	May	The Korean Intellectual Property Office (KIPO) joined as an LP in KFoF.
	June	KFoF, a government VC program, was launched, and KVIC was formed for the purpose of managing KFoF.
2005	June	KVIC was designated as the GP of KFoF.
	June	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.
	December	The government announced measures to vitalize startups.
	July	The government unveiled its comprehensive initiative to strengthen the competitiveness of SMEs.

Organizational Structure

KVIC has 6 divisions, 1 office, 14 teams and 3 offshore branches (as of August 24, 2020).

Figure 1

KVIC Organizational Chart



Source: KVIC

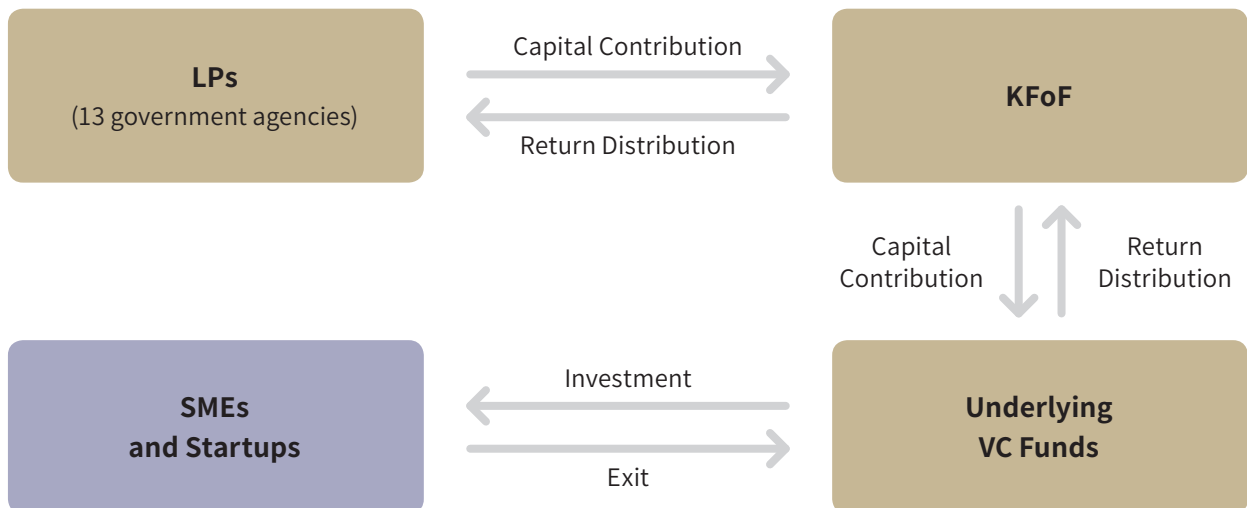
Korea Fund of Funds

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 4,687 million (KRW 5,628.2 billion) (as of June 30, 2020)
Size of Underlying Funds	USD 21,405 million (KRW 25,701.4 billion) (cumulative, as of June 30, 2020)
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 I	FVCIF II
Date of Formation	October 4, 2013	July 15, 2016
Fund Size	USD 113 million (KRW 135.4 billion) (as of June 30, 2020)	USD 331 million (KRW 397.2 billion) (as of June 30, 2020)
Size of Underlying Funds	USD 2,688 million (KRW 3,227.6 billion) (cumulative, as of June 30, 2020)	
Fund Term	21 years (2013-2034)	19 years (2016-2035)
LPs	KFoF/KVIC	KFoF/KVIC
GP	KVIC	

Angel Fund of Funds

Established in 2015, the Fund invests solely in angel funds that concentrate on startup or early-stage small businesses.

	Fund Profile
Date of Formation	November 18, 2015
Fund Size	USD 62 million (KRW 74 billion) (as of June 30, 2020)
Size of Underlying Funds	USD 96 million (KRW 114.8 billion) (cumulative, as of June 30, 2020)
Fund Term	20 Years (2015-2035)
LPs	KFoF/KVIC
GP	KVIC

Hana-KVIC Fund

This Fund officially launched its operations in 2019, primarily financed by 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 June 30, 2020)
Size of Underlying Funds	USD 185 million (KRW 222.5 billion) (cumulative, as of June 30, 2020)
Fund Term	10 years (2018-2028)
LPs	Hana Bank/KFoF/KVIC
GP	KVIC

KEPCO Fund

The Fund is intended to foster the growth of the power and energy sectors, and to identify and nurture not only SMEs and startup companies related to ICT applications in the sectors but also those 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 June 30, 2020)
Size of Underlying Funds	USD 73 million (KRW 88 billion) (cumulative, as of June 30, 2020)
Fund Term	10 years (2015-2025)
LPs	KEPCO/KFoF/KVIC
GP	KVIC

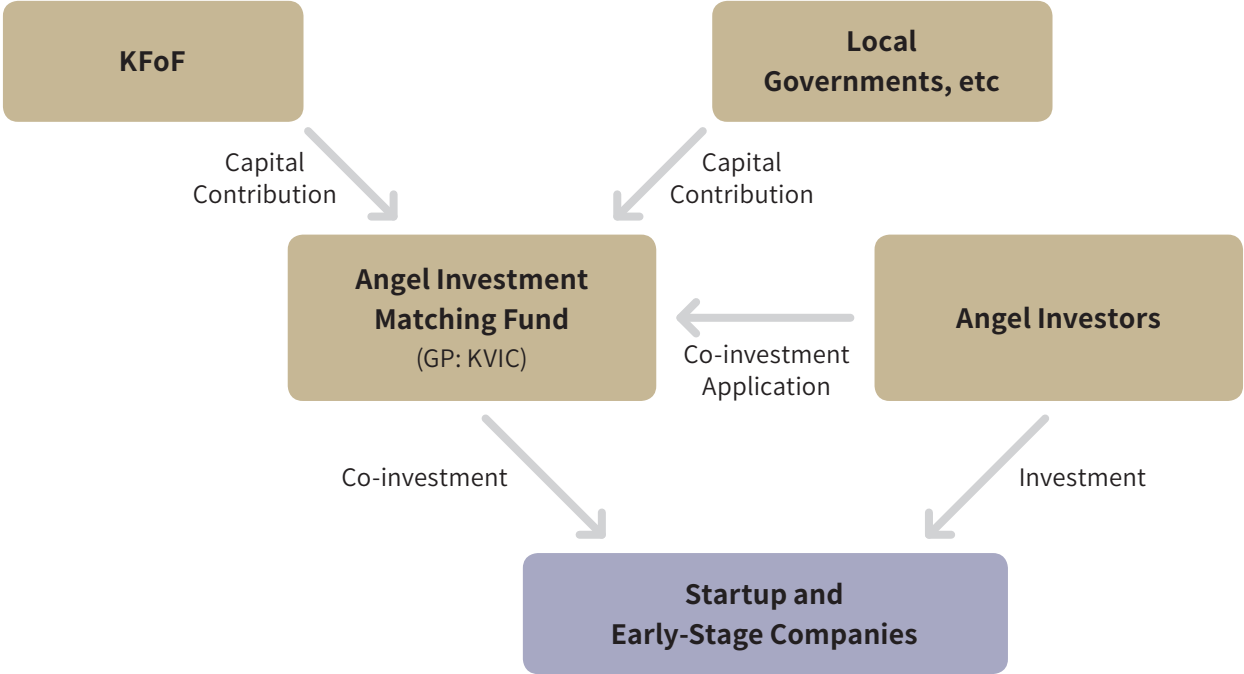
Other Funds

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 100 million (KRW 120 billion) and USD 89 million (KRW 107 billion) in AUM, respectively. All the job creation funds, KoFC-KVIC I and II, are currently liquidating their investments.

Co-Investment Funds

Angel Investment Matching Fund

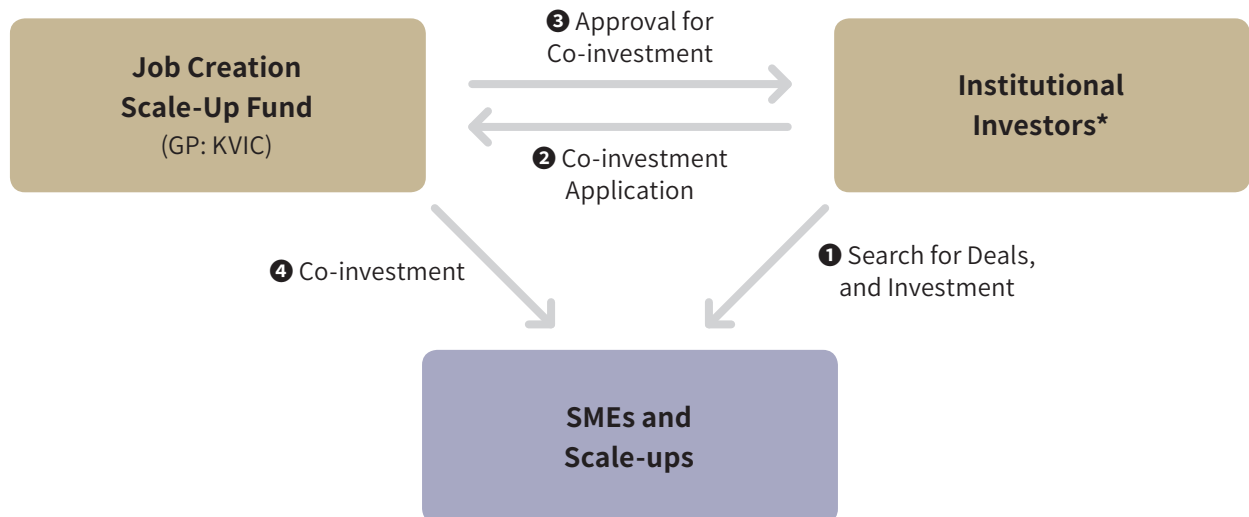
An angel investment matching fund in Korea refers to a public-private co-investment fund that is specially designed to nurture angel investors and angel clubs, thereby laying the foundation for startup creation and helping startup and early-stage companies fill their equity gaps. As of June 30, 2020, there were 16 angel investment matching funds with collective AUM of USD 160 million (KRW 192 billion).



Job Creation Scale-Up Fund

In August 2018, the Fund was formed to co-invest alongside institutional investors in SMEs and scale-up companies that are designated as a good job creator.

Fund Profile	
Date of Formation	August 16, 2018
Fund Size	USD 42 million (KRW 50.6 billion) (as of June 30, 2020)
Fund Term	8 years (2018-2026)
LPs	KFoF/KVIC
GP	KVIC



* Institutional investors who are qualified to manage small and medium enterprise establishment investment partnerships, Korea Venture Funds (KVF), new technology venture investment partnerships or private equity funds (PEFs).



1H2020 KOREAN VC INDUSTRY AT A GLANCE



Market Watch



This report does not include private equity (PE) data, and hence there may be some discrepancies in activity statistics between the overall VC market and the VC funds described below.

The analysis results are based on end-June 2020 data.
For all figures in this report, the following USD/KRW conversion rate as of June 30, 2020 can be used for reference: USD 1=KRW 1,200.7.



Venture Capital Funds in Korea

Fundraising

The launch of venture capital (VC) funds¹ set records with USD 4 billion (KRW 4,843.5 billion) committed in 2018 and 170 vehicles in 2019. In the first half of 2020, 56 new VC funds were established with USD 0.9 billion (KRW 1,138.8 billion) of committed capital, representing a decline of 16.4% in both fund count and capital committed compared to the same period last year.

Figure 1

5-year Trends in VC Fund Creation

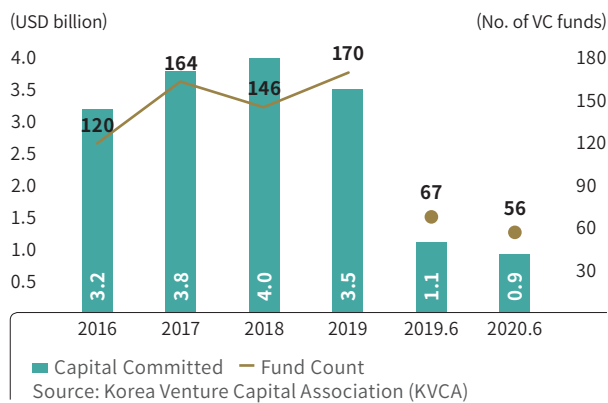


Figure 2

SME Establishment Investment Partnerships and KVs vs. New Technology Venture Investment Partnerships (expressed as % of total capital committed to Korean VC investment vehicles)

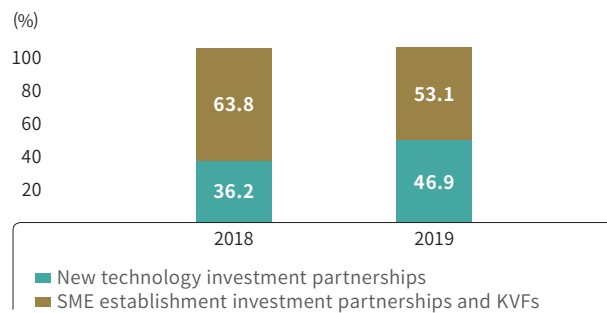


Table 1

Major VC Investment Vehicles in Korea

Vehicle	SME Establishment Investment Partnership	KVF	New Technology Venture Investment Partnership
Applicable Law	Support for Small and Medium Enterprises Establishment Act	Act on Special Measures for Venture Businesses	Specialized Credit Finance Business Act
GP	SME establishment investment company, new technology venture investment company, limited company, limited liability company, etc.	SME establishment 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)

1) Major investment vehicles in the Korean VC market can be divided largely into small and medium enterprise (SME) establishment investment partnerships, Korea Venture Funds (KVs) and new technology venture investment partnerships. While the Ministry of SMEs and Startups (MSS) is the competent authority for the first two types of VC funds, the Financial Services Commission (FSC) is the competent authority for the third type. Each of the competent authorities collates and analyzes VC data, and produces VC statistics annually. Among the three types of VC funds, SME establishment investment partnerships and KVs collectively accounted for 63.8% of the total committed capital in 2018, and 53.1% in 2019, exhibiting a slight year-over-year decline. Still, however, those VC funds are playing a dominant role in the local VC market. Hence, SME establishment investment partnerships and KVs are defined as VC funds for this report being prepared based on VC data from KVCA.

In addition, SME establishment partnerships and KVs have been consolidated into a single investment vehicle, called a venture fund (not yet officially named in English) under the Venture Investment Promotion Act, which took effective on August 12, 2020. But please note that the report has been drawn up in accordance with the old reporting framework because it is based on VC statistics for the first half of 2020.

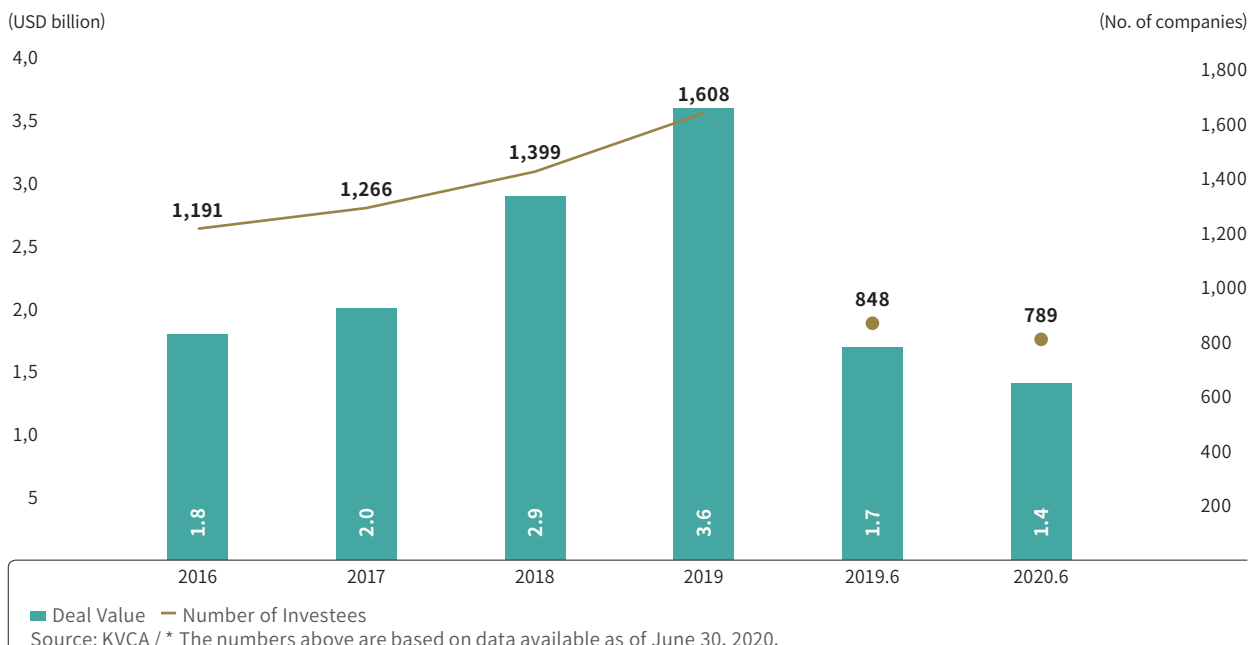
Investments

Investments by VC Funds

The first half of 2020 saw USD 1.4 billion (KRW 1,649.5 billion) invested in 789 companies by Korean VC funds, registering a 17.5% year-over-year (YoY) drop. The average investment per company also fell to USD 1.7 million (KRW 2.09 billion) from USD 2 million (KRW 2.35 billion) in the same period a year ago.

Figure 3

5-year Trends in Investments by VC Funds



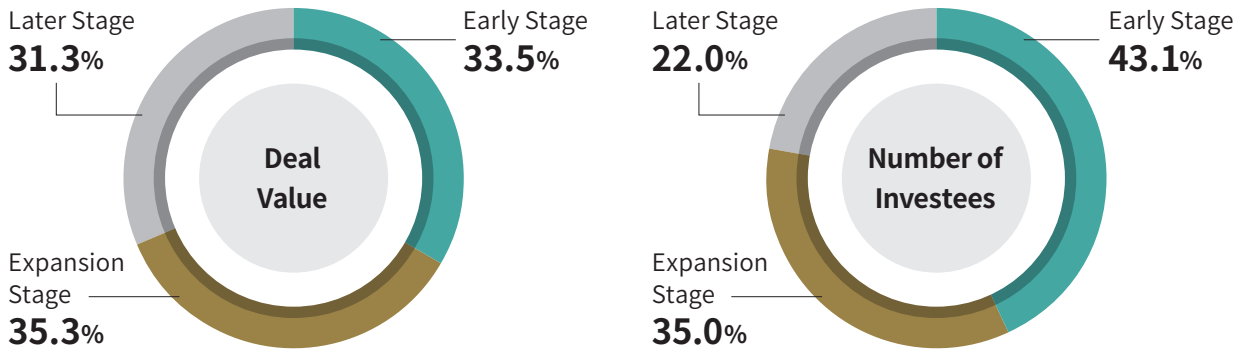
Deals by Stage and Industry (January to June 2020)

Breaking down VC investments in the first half of 2020 by stage of investee² shows that USD 484 million (KRW 581.5 billion) was deployed into expansion-stage companies (35.3% of total deal value), USD 460 million (KRW 552 billion) into early-stage companies (33.5%), and USD 430 million (KRW 516 billion) into later-stage companies (31.3%). Meanwhile, early-stage, expansion-stage and later-stage companies accounted for 43.1%, 35% and 22% of all investee companies, respectively, when it comes to the number of investees.

2) 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 has raised VC funding (early stage: less than 3 years/expansion stage: 3-7 years/late stage: more than 7 years).

Figure 4

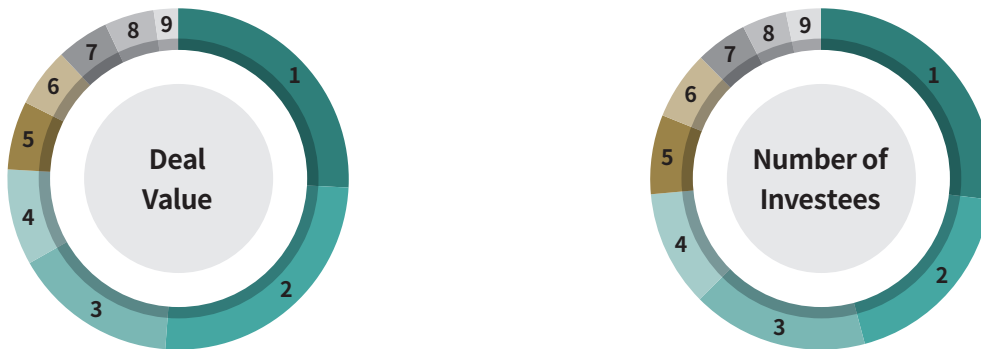
1H2020 Deal Activity by Stage - VC Funds



Source: KVCA

Figure 5

1H2020 Deal Activity by Industry - VC Funds



No	Sector	% of Total
1	Biotech/Healthcare	25.8
2	ICT Services	25.4
3	Distribution/Services	15.6
4	Electrics/Machinery/Equipment	9.1
5	Other	6.5
6	Film and TV/Performing Arts/Recording	5.6
7	ICT Manufacturing	5.0
8	Chemicals/Materials	4.7
9	Game	2.3

No	Sector	% of Total
1	ICT Services	26.9
2	Distribution/Services	18.9
3	Biotech/Healthcare	16.7
4	Film and TV/Performing Arts/Recording	11.0
5	Electrics/Machinery/Equipment	7.5
6	Other	6.5
7	Chemicals/Materials	4.9
8	ICT Manufacturing	4.2
9	Game	3.3

Source: KVCA

The first half of 2020's top industry³ with the highest amount invested was biotechnology/healthcare that attracted USD 354 million (KRW 425.6 billion), making up 25.8% of the total deal value. It was followed by ICT services with USD 349 million (KRW 418.9 billion), which accounted for 25.4% of the total, and distribution/services with USD 214 million (KRW 256.9 billion), which accounted for 19.0%. As for the number of investees broken down by industry, ICT services, distribution/services and biotechnology/healthcare constituted 26.9%, 18.9% and 16.7% of all investee companies, respectively.

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

3) The above industry classification is based on the Korean Standard Industrial Classification (KSIC) published by Statistics Korea.

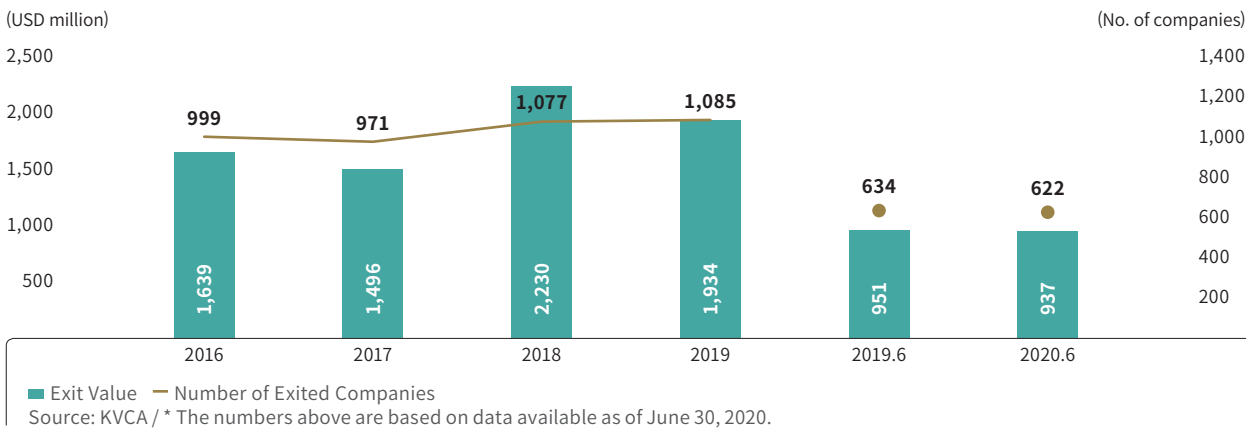
Exits

Exits by VC Funds

During the first six months of 2020, Korean VC funds exited 622 companies. These exits were collectively valued at USD 937 million (KRW 1,125.1 billion) - more specifically, USD 520 million (KRW 624.2 billion) in invested capital and USD 417 million (KRW 500.9 billion) in proceeds - reporting a 1.8x return. Compared to the first half of 2019, the gross exit proceeds rose by 0.5%, but the invested capital dropped by 3.0% and the number of exited companies fell by 1.9%. As a result, the aggregate value of VC exits decreased by 1.5%.

Figure 6

5-year Trends in Exits by VC Funds

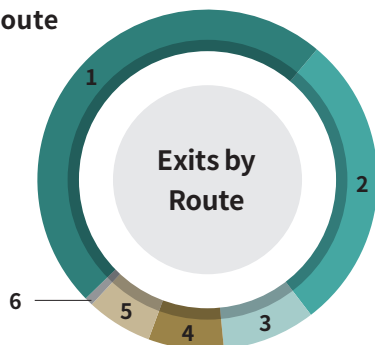


Exits by Route

The vast majority of VC exits in the first half of the year occurred via an initial public offering or secondary stock sale and buyback, representing 48.6% (USD 455 million or KRW 546.8 million) and 28.2% (USD 264 million or KRW 316.9 million) of all exits, respectively.

Figure 7

Exits by Route



No	Exit Route	% of Total
1	IPO	48.6
2	Secondary sale and buyback-stocks	28.2
3	Project	8.9
4	Secondary sale and buyback-bonds	7.2
5	Other	6.3
6	M&A	0.8

Source: KVCA



**1H2020 KOREA
FUND OF FUNDS:**
Trends in Fundraising,
Investments and Exits



Market Watch



This report is updated on a semi-annual basis
and the findings presented here are based on the
end-June 2020 data.

The exchange rate used at the time of writing
this report was USD 1=KRW 1,200.7.

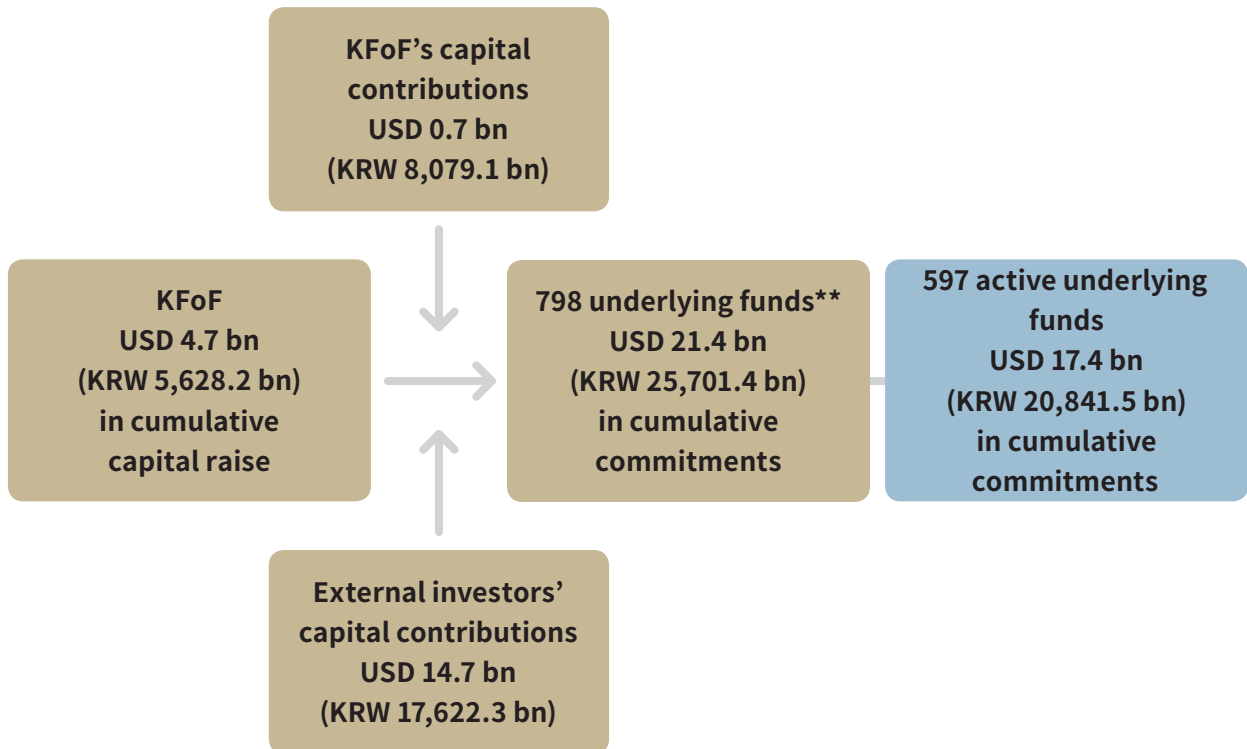


Korea Fund of Funds

As of June 30, 2020, Korea Fund of Funds (KFoF) has raised USD 4.7 billion (KRW 5,628.2 billion) since its inception. KFoF has so far created a total of 798 venture capital (VC) funds with USD 21.4 billion (KRW 25,701.4 billion) in cumulative committed capital, including USD 14.7 billion (KRW 17,622.3 billion) contributed by external investors. 597 of its underlying funds are operating currently with USD 17.4 billion (KRW 20,841.5 billion) in cumulative commitments. To date, KFoF has deployed USD 16.2 billion (KRW 19,486.9 billion) to 6,383 companies* through its 798 underlying funds.**

Figure 1

KFoF at a Glance



* The number of investees above excludes overlapping companies.

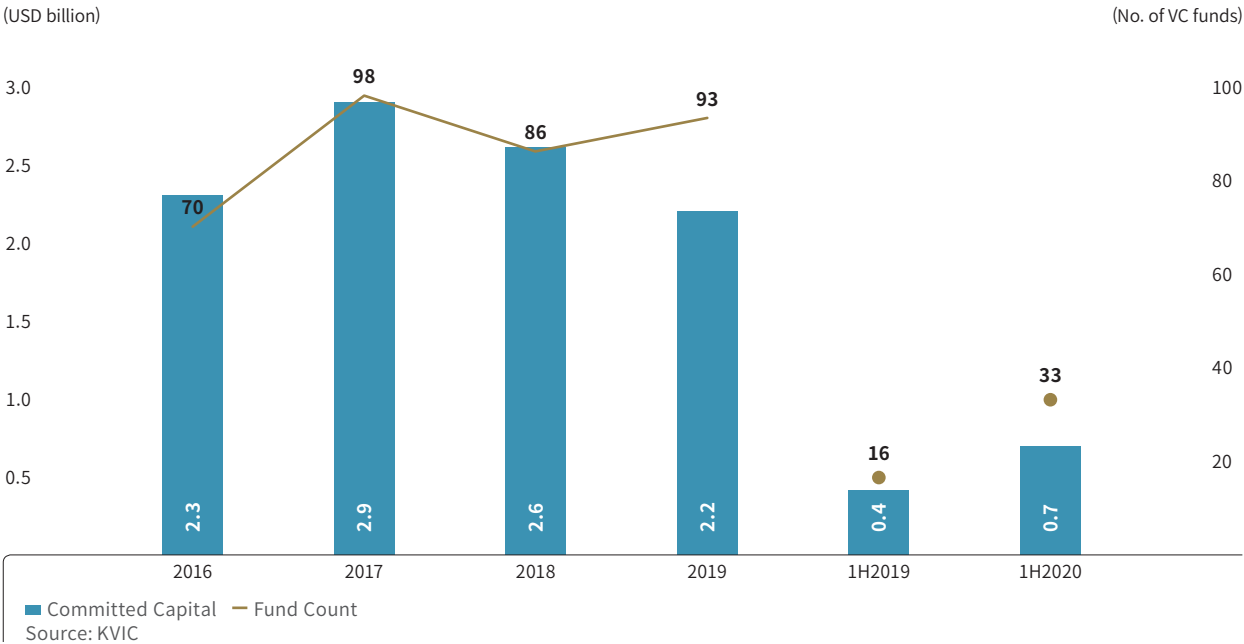
** The underlying funds include small and medium enterprise (SME) establishment investment partnerships, Korea Venture Funds (KVF), new technology venture investment partnerships, private equity funds (PEFs), corporate restructuring companies (CRCs), and private investment funds.

Fundraising (Cumulative 1H2020)

Over the last five years, there has been an overall increase in the number of new VC funds formed by KFoF and the total amount committed to the funds, both of which were at all-time highs in 2017 with 98 funds and USD 2.9 billion (KRW 3,440.2 billion) in committed capital. During the first six months of 2020, KFoF set up 33 new VC funds and committed USD 0.7 billion (KRW 839.3 billion) to them, registering a 106.3% jump in the number of new VC funds and a 69.9% hike in the committed capital to the funds when compared with the same period last year.

Figure 2

5-year Trends in Fund Creation by KFoF



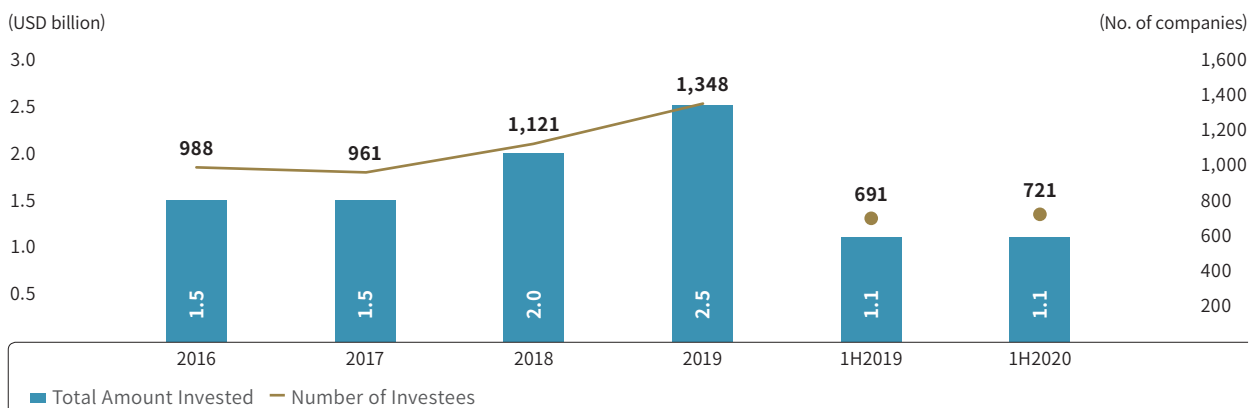
Investments

Investments by KFoF Underlying Funds

The first half of 2020 saw USD 1,075 million (KRW 1,290.3 billion) invested by 301 KFoF underlying funds in 721 companies. Compared to the same period in the previous year, the total amount invested declined by 5.2% whereas the number of investee or portfolio companies climbed by 4.3%.

Figure 3

5-year and 1H2020 Trends in Investments by KFoF Underlying Funds



■ Total Amount Invested — Number of Investees

Source: KVIC / *Based on data available as of June 30, 2020. / ** The total amount invested between 2016 and 2019 is based on the data available at the end of each year. / *** The number of investees above excludes overlapping companies.

Top-Ranked Investees and Industries

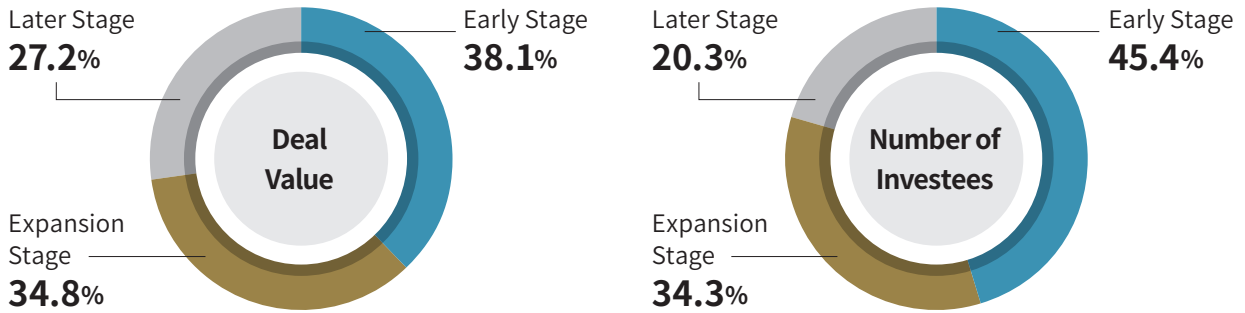
A deep dive into the overall investments made by the KFoF underlying funds in the first half of 2020 reveals that the average investee company received USD 1.7 million (KRW 1.79 billion) from 1.5 funds, and the average deal size was USD 14.7 million (KRW 15.8 million) for top 10 companies in terms of deal value. At the industry level, 19.6% (USD 236 million or KRW 253.2 billion) of the total amount invested by the KFoF underlying funds went to medical materials/pharmaceuticals, 16.2% (USD 195 million or KRW 209.5 billion) to software, 9.0% (USD 108 million or KRW 115.6 billion) to information services, 7.6% (USD 91 million or KRW 97.8 billion) to professional services, and 4.8% (USD 5.7 million or KRW 61.3 billion) to wholesale and retail trade.

Deals by Stage (Cumulative 1H2020)

Looking at the deals completed in the first half of 2020 broken down by stage of investee, early-stage companies (less than 3 years old) received USD 409 million (KRW 491.1 billion), accounting for 38.1% of the total deal value. Expansion-stage companies (3-7 years old) attracted USD 374 million (KRW 448.9 billion), representing 34.8% of the total, while later-stage companies (more than 7 years old) raised USD 292 million (KRW 350.3 billion), taking up 27.2%. In terms of the number of investees, early-stage, expansion-stage and later-stage companies comprised 45.4%, 34.3% and 20.3% of all investee companies, respectively.

Figure 4

1H2020 Deal Activity by Stage - KFoF Underlying Funds



Source: KVIC

Deals by Industry
(Cumulative 1H2020)

Biotechnology/healthcare was the largest recipient of VC funding totaling USD 286 million (KRW 343.5 billion) from the KFoF underlying funds in the first half of 2020, representing 26.7% of the total deals in terms of value. With USD 277 million (KRW 33.2 billion), ICT services was the second largest, representing 25.7% of the total, followed by distribution/services with USD 146 million (KRW 175.7 billion) which accounted for 13.6%. When it comes to the number of investees by industry, ICT services was the top industry, comprising 27.7% of all investee companies. Biotechnology/healthcare and distribution/services came second with 17% each.

Figure 5

1H2020 Deal Activity by Industry - KFoF Underlying Funds



No	Sector	% of Total
1	Biotech/Healthcare	26.7
2	ICT Services	25.7
3	Distribution/Services	13.6
4	Electrics/Machinery/Equipment	8.7
5	Other	6.6
6	Chemicals/Materials	5.6
7	Film and TV/Performing Arts/Recording	5.3
8	ICT Manufacturing	5.0
9	Game	2.8

No	Sector	% of Total
1	ICT Services	27.7
2	Distribution/Services	17.0
3	Biotech/Healthcare	17.0
4	Film and TV/Performing Arts/Recording	10.9
5	Electrics/Machinery/Equipment	7.7
6	Other	7.1
7	Chemicals/Materials	5.0
8	ICT Manufacturing	4.1
9	Game	3.5

Source: KVIC

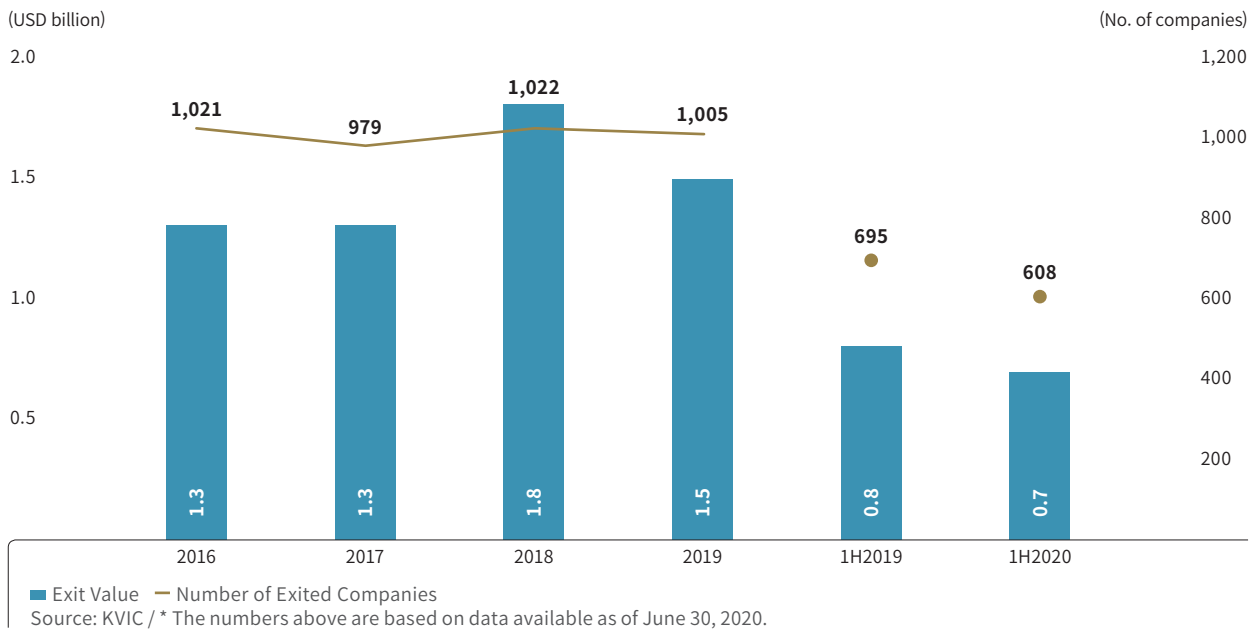
Exits

Exits by KFoF Underlying Funds

During the first half of 2020, USD 680 million (KRW 816.3 billion)* was returned to 296 KFoF underlying funds from exits across 608 companies, generating a gross return multiple of nearly 1.8x. The exit value and the number of exited companies were down by 14.3% and 12.5% year over year, respectively.

Figure 6

5-year and 1H2020 Trends in Exits by KFoF Underlying Funds



Exit Value and Exits by Industry

Of overall exits in the first six months of 2020, the largest exit was worth USD 30 million (KRW 36.3 billion) and the highest exit multiple was 22.5x. When breaking down the exit value by industry, medical materials/pharmaceuticals represented 29.3% (USD 199 million or KRW 239.5 billion) of the total exit value, software 9.4% (USD 64 million or KRW 76.7 billion), wholesale and retail trade 7.2% (USD 49 million or KRW 58.8 billion), information services 7.1% (USD 48 million or KRW 57.9 billion), and audiovisual content (including projects) 5.9% (USD 40 million or KRW 47.9 billion).

* USD 380 million (KRW 456.5 billion) in initial investments and USD 300 million (KRW 359.8 billion) in exit proceeds



1H2020 KFOF INVESTMENTS BY INDUSTRY



Market Watch



(For all figures in the article, the following conversion can
be used for reference: USD 1=KRW 1,200.7)



During the first half of 2020, KFoF invested USD 1.07 billion (down 24.1% HoH) in 721 companies and projects (down 9.8% HoH) through its underlying VC funds, showing a marked decline in the total amount invested compared to the second half of 2019. However, the number of portfolio companies (or investee companies) rose 5.1% and the amount invested decreased only 3.7% on a YoY basis. The average amount invested was USD 1.5 million per company in the first half of 2020, down 15.9% from USD 1.8 million in the second half of 2019.

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.

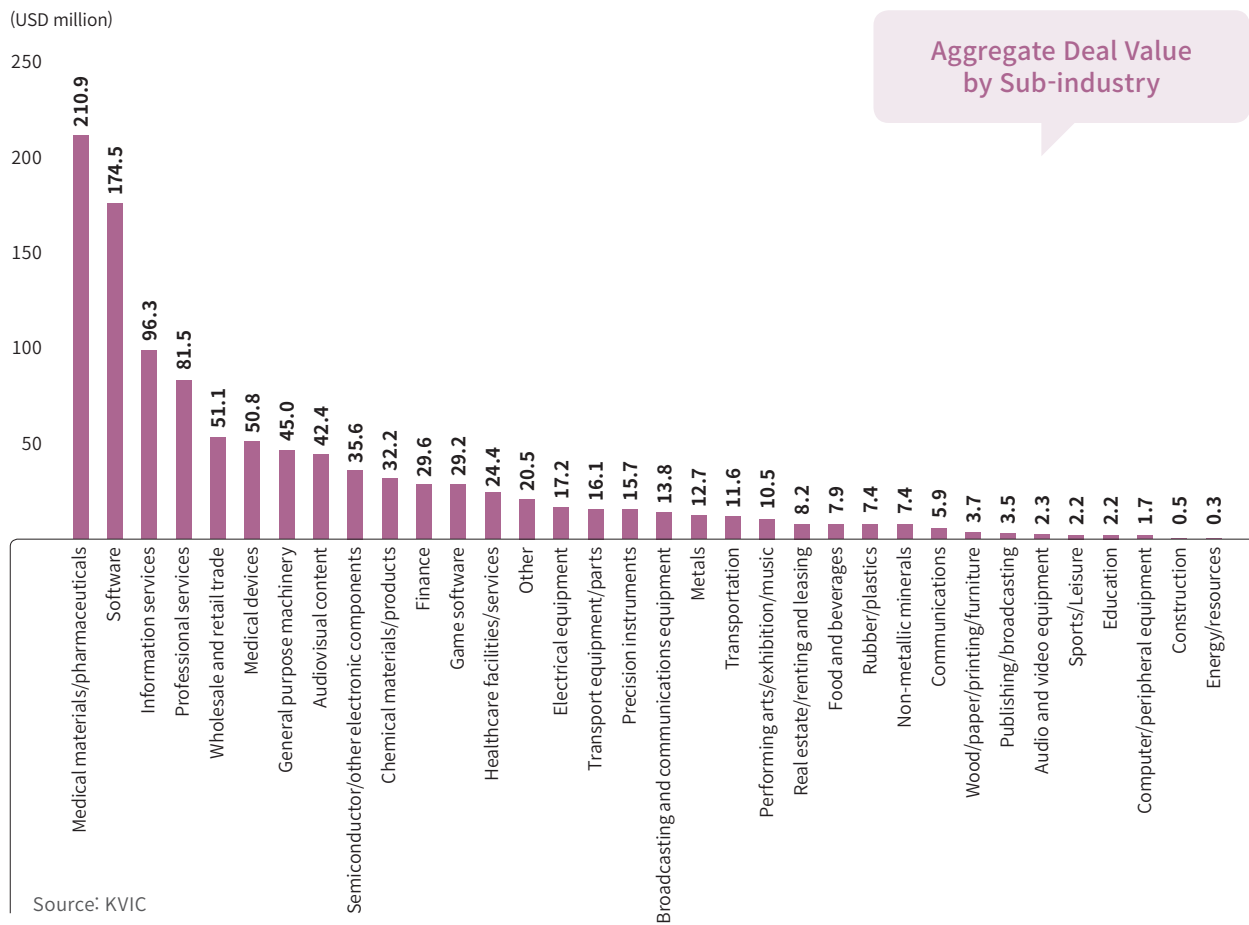
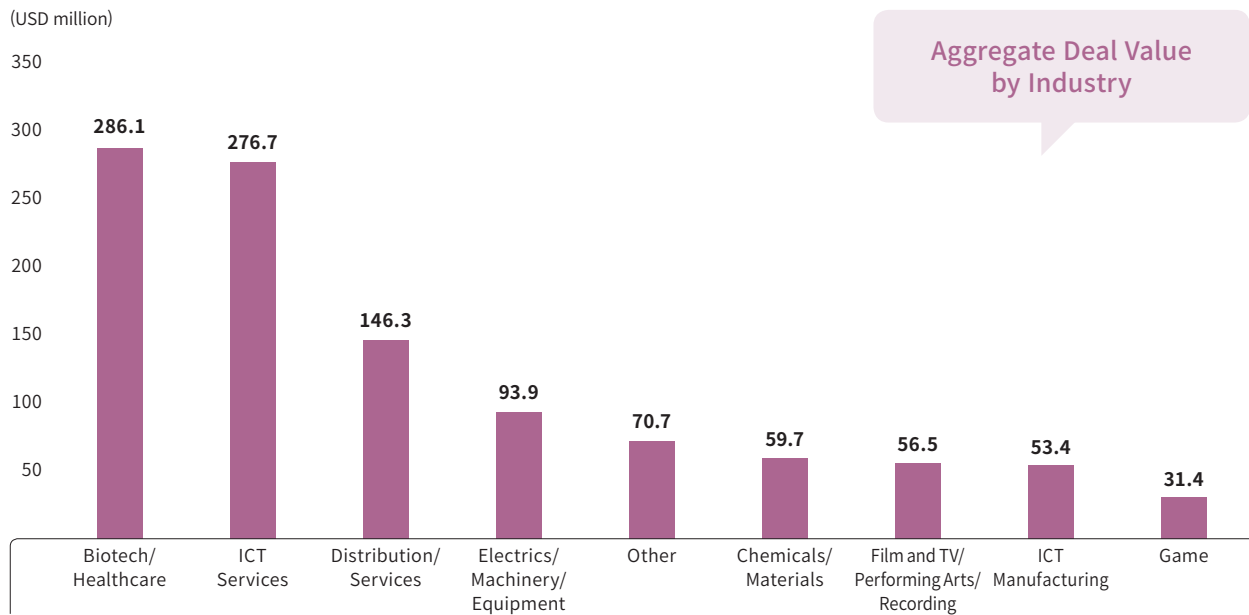
Table 1

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/furniture; real estate/renting and leasing; textiles/ clothing/leather; other	

Figure 1

1H2020 KFoF Investment Activity by Industry and Sub-industry



Looking at the distribution of the investments by industry, the hottest areas of VC investment in terms of the amount invested were biotechnology/healthcare (USD 286 million, down 15.1% HoH), ICT services (USD 277 million, down 31.9% HoH), and distribution/services (USD 146 million, down 41.3% HoH). The Korean market saw strong investment activity in these three industries over the past five years. This trend has also continued into 2020.

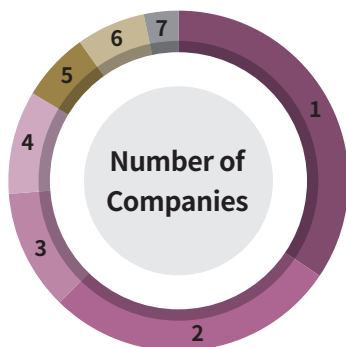
There were 15 deals worth USD 8.3 million (KRW 10 billion) or more in the first half of 2020, down slightly from 18 deals in the first half of 2019. For the full year, the number of deals valued more than USD 8.3 million was 44 in 2019, which is a steep increase compared to the previous two years (22 in 2017 and 29 in 2018). But it remains to be seen whether the number of mega-deals for 2020 will continue its upward trend seen over the last three years since an uptick in the deal count is not clearly seen in the second half versus the first half.

Breaking down the mega-deals by industry, biotechnology/healthcare represented four of the 15 mega-deals. While ICT services, distribution/services and electrics/machinery/equipment each took up three of the total mega-deals, ICT manufacturing and chemicals/materials each represented one of the total. In the meantime, the number of deals worth USD 4.2 million (KRW 5 billion) or more was 61 in the first half of 2020, similar to 60 in the first half of 2019. By industry, 21 deals went to biotechnology/healthcare, 17 to ICT services, 7 to electrics/machinery/equipment, and 6 to wholesale trade/services. The largest recipient of VC funding is a biotech/healthcare company operating an ambulatory surgery center.

Figure 2

1H2020 Industry Breakdown of Companies with USD 4.2M+ (KRW 5B+) in VC Funding from KFoF through its Underlying Funds

Breakdown of Companies Raising KRW 5B + in VC funding by Industry



No	Sector	Number of Companies
1	Biotech/Healthcare	21
2	ICT Services	17
3	Electrics/Machinery/Equipment	7
4	Distribution/Services	6
5	ICT Manufacturing	4
6	Other	4
7	Chemicals/Materials	2

Source: KVIC

Table 2

1H2020 KFoF Investment Activity

(USD million)

	1H2020	2H2019	HoH	Number of portfolio companies	Average amount invested
Total	1,074.60	1,415.90	△24.10%	721	1.5
Biotech/Healthcare	286.1	337.0	△15.1%	132	2.2
Medical devices	50.8	74.5	△31.9%	33	1.5
Healthcare facilities/services	24.4	2.6	831.5%	3	8.1
Medical materials/pharmaceuticals	210.9	259.9	△18.9%	98	2.2
ICT Services	276.7	406.1	△31.9%	215	1.3
Software	174.5	222.1	△21.5%	154	1.1
Information services	96.3	159.0	△39.5%	73	1.3
Communications	5.9	24.9	△76.2%	1	5.9
Distribution/Services	146.3	249.1	△41.3%	132	1.1
Education	2.2	16.5	△86.4%	8	0.3
Wholesale and retail trade	51.1	124.0	△58.8%	54	0.9
Transportation	11.6	22.7	△49.2%	8	1.4
Professional services	81.5	85.9	△5.1%	62	1.3
Electrics/Machinery/Equipment	93.9	68.0	38.1%	60	1.6
Transport equipment/parts	16.1	7.8	107.3%	6	2.7
General purpose machinery	45.0	35.1	28.2%	24	1.9
Electrical equipment	17.2	17.4	△1.4%	20	0.9
Precision instruments	15.7	7.7	102.2%	10	1.6
Other	70.7	109.0	△35.2%	55	1.3
Construction	0.5	0.2	83.3%	2	0.2
Finance	29.6	10.9	172.5%	23	1.3
Other	20.5	109.0	△81.2%	16	1.3
Wood/paper/printing/furniture	3.7	-	-	3	1.2
Real estate/renting and leasing	8.2	17.7	△53.9%	5	1.6
Energy/resources	0.3	0.2	39.6%	2	0.1
Food and beverages	7.9	17.7	△55.5%	5	1.6
Chemicals/Materials	59.7	39.0	53.1%	39	1.5
Rubber/plastics	7.4	1.8	300.9%	10	0.7
Metals	12.7	2.9	335.5%	4	3.2
Non-metallic minerals	7.4	1.6	351.5%	6	1.2
Chemical materials/products	32.2	32.6	△1.1%	20	1.6
Film and TV/Performing Arts/Recording	56.5	112.0	△49.6%	85	0.7
Performing arts/exhibition/music	10.5	18.3	△42.4%	9	1.2
Audiovisual content	42.4	91.4	△53.6%	69	0.6
Publishing/broadcasting	3.5	2.3	50.0%	8	0.4
ICT Manufacturing	53.4	56.3	△5.1%	32	1.7
Semiconductor/other electronic components	35.6	40.6	△12.3%	23	1.5
Audio and video equipment	2.3	1.7	40.0%	2	1.2
Computer/peripheral equipment	1.7	8.6	△80.7%	1	1.7
Broadcasting and communications equipment	13.8	5.4	155.3%	7	2.0
Game	31.4	39.0	△19.4%	27	1.2
Game software	29.2	39.0	△25.1%	26	1.1
Sports/leisure	2.2	-	-	1	2.2

Source: KVIC

The amount invested by KFoF through its underlying funds shrank in almost all industries, except for electrics/machinery/equipment and chemicals/materials that saw an increase in VC investment in the first half of 2020 compared to the second half of 2019. Within electrics/machinery/equipment, USD 10.4 million was invested in an automobile parts company, USD 8.3 million in an OLED equipment maker, and USD 8.3 million in a solid oxide fuel cell (SOFC) manufacturer. Within chemicals/materials, USD 8.3 million was invested in a shipbuilding materials supplier and USD 4.2 million in a cosmetics manufacturer.

A relatively small percentage decrease in the amount invested was seen in biotechnology/healthcare (down USD 50.9 million or 15.1% HoH) and ICT manufacturing (down USD 2.9 million or 5.1% HoH) during the first six months of 2020. For the biotechnology/healthcare industry, healthcare facilities/services had the ambulatory surgical center operator that attracted USD 23.6 million, the highest amount of VC funding. For the ICT manufacturing industry, broadcasting and communications equipment experienced an increase in the amount invested by USD 8.4 million or 155.3% HoH. The biggest percentage decline in the amount invested was shown in such sub-industries as education (down USD 14.3 million or 86.4% HoH), computer/peripheral equipment (down USD 7 million or 80.7% HoH), and communications (down USD 19 million or 76.2% HoH).

With respect to the number of portfolio companies, ICT services was the most popular industry with 215 portfolio companies in the first half of 2020. Within ICT services, software came on top with 154 companies. The average amount per investment was the highest in healthcare facilities/services within biotechnology/healthcare. The large-scale investment in the ambulatory surgery center operator, as explained above, drove the increase in the average amount invested in that sub-industry.

Table 3 lists the keyword hashtags describing the features of a product or service developed, produced or provided by the portfolio companies receiving USD 4.2 million (KRW 5 billion) or more in VC funding from KFoF through its underlying funds in the first half of 2020. These hashtags aim to help readers better understand the characteristics of portfolio companies in the KFoF underlying funds.

Table 3

Keyword Hashtags for Portfolio Companies with USD 4.2M+ (KRW 5B+) in VC Funding from the KFoF Underlying Funds in 1H2020

Biotech/ Healthcare	#U.S. Ambulatory Surgery Center #Development of TCR-T Cell Therapy Products #Targeted Protein Degradation Technology #Diagnostic Tests for Colorectal Cancer #Drug Development Platform #Nanomedicine #Antibody Candidates for Immuno-oncology Therapy #Immunosuppressant # Proteolysis-Targeting Chimaera (PROTAC) Technology #Development of New Synthetic Drugs #Cellular Therapy Products #Probiotics #SaaS Platform for Diabetes Management #Stem Cell Therapy Products #Incurable Brain Diseases #Development of New Drugs for Type 2 Diabetes #Drug Delivery System #Diagnostic Algorithm #Medication for Alzheimer’s Disease #Targeted Cell Therapy Products
ICT Services	#Digital Chronic Diseases Management #Electric Bike #AI-based SaaS #Ad Tech #Commerce Platform #Comparison of Plastic Surgery Prices #Online Commerce #Non-Face-To-Face Laundry Service #Electronic Payment and Settlement Services #Billing System #Online Platform for Real Estate Transactions #AI-based Robo Advisor #SAP ERP Solution #Delivery Service #Textile Industry #e-Book Service #Intellectual Property Sharing Platform # Cardiovascular Diseases
Distribution/ Services	#3D Semiconductor Packaging #Funeral Service #Mobile Ads Platform #Cashback Platform #Cold Chain
Electrics/Machinery/ Equipment	#Battery Case for Electric Vehicles #OLED #Fuel Cell #Lithium Ion Battery Cathode #Military Fuel Cell #Offshore Plant #Shipbuilding Materials #Smart Factory #Flow Measurement
Other	#Apparel OEM #Mobile Payment #Shared Apartment #Fitness Equipment #Shared Office Space
Electrics/Machinery/ Equipment	#Air Purifier Filter
ICT Manufacturing	#Marine Communication Equipment #System-on- Chip Design Platform #Semiconductor Electrical Testing #Automotive Image Signal Processor (ISP)
Other	#Blockchain-based Easy Payment Service #Lending Platform for SMEs in Southeast Asia #Online Platform for the Sale of Financial Products
Chemicals/Materials	#Media Commerce #Shipbuilding Materials

Source: KVIC



ANALYSIS OF UNICORNS AND UNICORN CANDIDATES IN KOREA



Market Watch



(For all figures in the article, the following conversion can be used for reference: USD 1 = KRW 1,200.7)

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This report provides a semi-annual analysis of portfolio companies with high valuations in KFoF's underlying funds with a particular focus on company characteristics.

This issue of KVIC MarketWatch offers a glimpse into unlisted portfolio companies valued at KRW 200 billion (USD 166.6 million) or more as of December 31, 2019.



Introduction

A unicorn is an imaginary creature portrayed as a horse with a single horn on its forehead. What is a unicorn in the business world? The term was first used in 2013 by Aileen Lee, founder of U.S. venture capital firm Cowboy Ventures. Nowadays, the term “unicorn” is often used to describe an unlisted or privately held company with a value of USD 1 billion or more.

According to the list of the Global Unicorn Club released by U.S.-based market research firm CB Insights, there were 479 unicorns around the world, with a total cumulative valuation of nearly USD 1,439.1 billion as of July 21, 2020. Ten of them were born in South Korea, including Musinsa, Viva Republica (Toss), Yanolja, Aprogen, L&P Cosmetics, Yello Mobile, Wemakeprice, GPclub, Coupang, and Krafton (formerly Bluehole).

KVIC MarketWatch sheds light on the characteristics of unicorns and unicorn candidates among portfolio companies in the underlying funds of KFoF on a semi-annual basis.

This report analyzes the distribution of 36 unicorns and unicorn candidates worth KRW 200 billion (USD 166.6 million) or more by valuation, funding amount, industry, company age and revenue. The selection of these unicorns and unicorn candidates are based on the semi-annual valuation of portfolio companies in KFoF’s underlying funds as of December 31, 2019. For analysis purposes, company valuations are split into three ranges of between KRW 200 billion and KRW 500 billion (USD 166.6 million - USD 416.4 million), between KRW 500 billion and KRW 1 trillion (USD 416.4 million - USD 832.8 million), and KRW 1 trillion (USD 832.8 million) or more.

Valuation

December 2019 ended with an increase in the number of unicorns and unicorn candidates by 7 along with an 18.5 % rise in their collective valuation over the previous half year. The average and median valuations of all unicorns and unicorn candidates fell by 4.6% and 20.6%, respectively, over the same period, as six new companies with relatively lower valuations between USD 166.6 million and USD 249.9 million were added to the list of unicorns and unicorn candidates. While the combined total valuation of 36 companies classified as unicorns or unicorn candidates was USD 2.02 billion, the average and median valuations stood at USD 561 million and USD 269.3 million, respectively.

The total number of companies on the list of unicorns and unicorn candidates increased by 7 from 29 as at end-June 2019 to 36 as at end-December 2019. More specifically, ten new companies joined the list whereas three existing companies were taken off the list. The number of companies in the valuation range of USD 832.8 million or more was up by 1 and the number of those in the range between USD 416.4 million and USD 832.8 million was down by 1, as one company previously included in the USD 416.4 million to USD 832.8 million range moved into the group of companies valued at USD 832.8 million or more (further, in the USD 416.4 million to USD 832.8 million valuation range, one of existing companies was removed from the list as a result of a full exit, while one company previously valued between USD 166.6 million and USD 416.4 million was newly included). The number of companies valued between USD 166.6 million and USD 416.4 million jumped to 25 from 18 over the same period.

As of December 31, 2019, the average and median values for six companies in the range of USD 832.8 million or more rose by 7.3% and 34.9% half on half (HoH) to nearly USD 1.8 billion and USD 1.6 billion, respectively, driven by a spike of at least USD 333.1 million in the average valuation of existing companies. The average and median values were about USD 577.1 million and USD 600 million for five companies in the USD 416.4 million to USD 832.8 million range, and approximately USD 245.5 million and USD 238.9 million for 25 companies in the USD 166.6 million to USD 416.4 million range, respectively.

Table 1

Valuation Distribution

Valuation Range	Number of Companies (▲ indicates a HoH increase; ▼ indicates a HoH decrease)		
USD 832.8 million or more	6 (▲1)		
USD 416.4 million - USD 832.8 million	5 (▼1)	Valuation Range	No. of Companies
		USD 749.6 mn - USD 832.8 mn	0 (▼1)
		USD 666.3 mn - USD 749.6 mn	1 (▼1)
		USD 583.0 mn - USD 666.3 mn	2 (-)
		USD 499.7 mn - USD 583.0 mn	0 (-)
USD 166.6 million - USD 416.4 million	25 (▲7)	USD 416.4 mn - USD 499.7 mn	2 (▲1)
		USD 333.1 mn - USD 416.4 mn	4 (-)
		USD 249.9 mn - USD 333.1 mn	5 (▲1)
		USD 166.6 mn - USD 249.9 mn	16 (▲6)
Total	36 (▲7)		

Source: KVIC

Table 2

Total, Average and Median Valuations

Valuation Range	Total Valuation (USD million)	Average Valuation (USD million)	Median Valuation (USD million)
USD 832.8 million or more	11,172.1 (28.7% HoH)	1,862.0 (7.3% HoH)	1,568.4 (34.9% HoH)
USD 416.4 million - USD 832.8 million	2,885.6 (-24.3% HoH)	577.1 (-9.1% HoH)	600.0 (-5.5% HoH)
USD 166.6 million - USD 416.4 million	6,137.3 (34.7% HoH)	245.5 (-3.0% HoH)	238.9 (6.5% HoH)
Total	20,194.9 (18.5% HoH)	561.0 (-4.6% HoH)	269.3 (-20.6% HoH)

Source: KVIC

Funding Amount

By the end of June 2020, the 36 unicorns and unicorn candidates received a total of USD 596.8 million in funding from the underlying funds of KFoF and other FoFs managed by KVIC. The average investment deal per company amounted to approximately USD 16.6 million.

Dividing the unicorns and unicorn candidates into three groups by valuation range, the average and median deal sizes were USD 14.2 million and USD 8.1 million for companies in the USD 832.8 million or more range, USD 30 million and USD 30.4 million for companies in the USD 416.4 million to USD 832.8 million range, the highest among the three groups, and USD 14.4 million and USD 11.4 million for those in the USD 166.6 million to USD 416.4 million range, respectively.

For companies in the valuation range of USD 832.8 million or more, the deal values changed slightly thanks to the addition of the new entrant, although there was no new deal attracted by the existing companies for the period from February to June 2020. In the meantime, for companies valued between USD 416.4 million and USD 832.8 million, the value of the deal attracted by the newcomer surpassed USD 46.6 million, leading to a dramatic increase of 32.4%, 58.8% and 114.9% HoH in the total, average and median deal sizes, respectively.

Companies in the USD 416.4 million to USD 832.8 million valuation range had 1.1 times and 2.8 times larger average and median deal sizes than those in the USD 832.8 million or more range, and 1.1 times and 1.7 times larger than those in the USD 166.6 million to USD 416.4 million range. The average deal size difference between unicorn companies (valued at USD 832.8 million or more) and unicorn candidates (valued between USD 166.6 million and USD 416.4 million) was not pronounced.

Table 3

Total, Average and Median Deal Sizes

Valuation Range	Total Deal Value (USD million)	Average Deal Value (USD million)	Median Deal Value (USD million)
USD 832.8 million or more	85.0 (8.5% HoH)	14.2 (-9.6% HoH)	8.1 (-2.5% HoH)
USD 416.4 million - USD 832.8 million	150.1 (32.4% HoH)	30.0 (58.8% HoH)	30.4 (114.9% HoH)
USD 166.6 million - USD 416.4 million	360.9 (47.8% HoH)	14.4 (6.5% HoH)	11.4 (26.4% HoH)
Total	596.1 (36.8% HoH)	16.6 (10.2% HoH)	11.4 (30.5% HoH)

Source: KVIC

Industry

The analysis of the companies broken down by industry and sub-industry according to KVIC Industry Classification (see the last page of this report for more details) reveals that ICT services, biotechnology/healthcare and distribution/services were the top industries for the birth of unicorns and unicorn candidates, representing 17 (47.2%), 7 (19.4%) and 6 (16.7%) of the 36 companies. Their combined proportion was 83.3%. Five out of the 10 new entrants are within ICT services, and four are within biotechnology/healthcare. While game and other both had two of the unicorns and unicorn candidates, ICT manufacturing and chemicals/materials both had one.

Looking at them by sub-industry, software boasted of 11 unicorns and unicorn candidates, followed by information services (6), wholesale and retail trade (4), medical materials/pharmaceuticals (4), and medical devices (3).

Table 4

Industry Distribution According to KVIC Industry Classification

Industry Classification	Number of Companies (▲ indicates a HoH increase; ▼ indicates a HoH decrease)		
		Sub-Industry Classification	Number of Companies
ICT Services	17 (▲5)	Software	11 (▲3)
		Information services	6 (▲2)
ICT Manufacturing	1 (▲1)	Semiconductor/other electronic components	1 (▲1)
Distribution/Services	6 (▼2)	Wholesale and retail trade	4 (▼1)
		Professional services	2 (▼1)
Biotechnology/Healthcare	7 (▲4)	Medical materials/pharmaceuticals	4 (▲2)
		Medical devices	3 (▲2)
Game	2 (-)	Game software	2 (-)
Other	2 (-)	Real estate/renting and leasing	1 (-)
		Textiles/clothing/leather	1 (-)
Film and TV/Performing Arts/Recording	0 (▼1)	Performing arts/exhibition/music	0 (▼1)
Chemicals/Materials	1 (-)	Chemical materials/products	1 (-)
Total			36 (▲7)

Source: KVIC

The industry distribution of the unicorns and unicorn candidates according to the Korean Standard Industrial Classification (KSIC) shows that 10 of the 36 companies are from application software publishing, and 3 each from database and online information provision, and manufacture of other medical and surgical equipment and orthopedic appliance n.e.c.

Compared with the previous HoH analysis, newcomers from manufacture of animal medicaments, manufacture of memory electronic integrated circuits, computer system consultancy and activities, and portals and other internet information media service activities joined the list of unicorns and unicorn candidates. On the other hand, companies from maintenance and repair services of electrical, electronic and precision equipment, electronic commerce on a fee or contract basis via internet, and music and sound recording publishing dropped off the list because of a decrease in valuation or an exit.

Table 5

Industry Distribution According to the KSIC

Korean Standard Industrial Classification (KSIC)	No. of Companies*	Korean Standard Industrial Classification (KSIC)	No. of Companies*
Application software publishing	10 (▲3)	System software publishing	1 (-)
Database and online information provision	3 (-)	Manufacture of medical supplies and related other medicaments	1 (-)
Manufacture of other medical and surgical equipment and orthopedic appliance n.e.c.	3 (▲2)	Research and experimental development on medical sciences and pharmacy	1 (-)
Online game software publishing	2 (-)	Renting of motor vehicles	1 (-)
Electronic commerce on a fee or contract basis via internet	2 (▼1)	Retail sale of eyeglasses and lens	1 (-)
Manufacture of other textiles n.e.c.	1 (-)	Computer programming services	1 (-)
Activities of management consultancy	1 (-)	Wholesale of cosmetics and related products	1 (-)
Manufacture of memory electronic integrated circuits	1 (▲1)	Manufacture of perfumes and cosmetics	1 (-)
Research and experimental development on physics, chemistry and biology	1 (▲1)	Other professional services	1 (-)
Computer system consultancy and activities	1 (▲1)	Maintenance and repair services of electrical, electronic and precision equipment	0 (▼1)
Portals and other internet information media service activities	1 (▲1)	Music and sound recording publishing	0 (▼1)
Manufacture of animal medicaments	1 (▲1)		

Source: KVIC

* ▲ indicates a HoH increase in number, ▼ indicates a HoH decrease in number.

Company Age

The average age of the 36 companies analyzed stood at 8.4 years as of June 30, 2020, unchanged from that of the 29 companies analyzed as of February 29, 2020. By valuation range, the average age was 10.3 years for the six companies worth USD 832.8 million or more, 9.1 years for the five companies worth between USD 416.4 million and USD 832.8 million, and 7.8 years for the 25 companies worth between USD 166.6 million and USD 416.4 million. The age of the companies varied greatly, ranging from 2 years (the youngest) to 23.1 years (the oldest). The standard deviation was 4.6 years for the companies in the USD 166.6 million to USD 416.4 million valuation range, greater than 2.9 years for those in the USD 832.8 million or more range and 2.4 years for those in the USD 416.4 million to USD 832.8 million range.

Table 6

Company Age as of June 30, 2020

Valuation Range	Average Company Age (number of years)	Oldest	Youngest
	(▲ indicates a HoH increase; ▼ indicates a HoH decrease)		
USD 832.8 million or more	10.3 (▲1)	13.4 (▲0.5)	6.9 (▲0.3)
USD 416.4 million - USD 832.8 million	9.1 (▼0.9)	12.3 (▼2.8)	5.5 (▲0.3)
USD 166.6 million - USD 416.4 million	7.8 (▲0.3)	23.1 (▲0.3)	2 (▲0.3)
Total	8.4 (-)	23.1 (▲0.3)	2 (▲0.3)

Source: KVIC

Revenue

We analyzed the revenues of the 36 companies which were recognized and calculated for the year ended December 31, 2019 (FY 2019) according to each company's accounting policy. The analysis finds that the average revenue was USD 107 million. The revenue of the companies valued at USD 832.8 million or more averaged approximately USD 302.8 million, a 22.5% drop compared to our previous analysis (for FY 2018 revenue). The decline was mainly due to a 17.5% decrease in the average revenue of five existing unicorns. The average revenue of the companies valued between USD 416.4 million and USD 832.8 million stood at USD 189.9 million, up 48.7%, thanks to an increase in the revenues of both new and existing companies in that valuation range (notably with a 75.4% rise in the average revenue of four existing companies). Compared to the prior analysis, the average revenue of the companies in the USD 166.6 million to USD 416.4 million range was down 28.5% to USD 43.4 million because the average revenue of newcomers (USD 16.8 million) was relatively lower than that of existing companies.

Table 7

FY 2019 Average Revenue

Valuation Range	Average Revenue (USD million)
USD 832.8 million or more	302.8 (-22.5% HOH)
USD 416.4 million - USD 832.8 million	189.9 (48.7% HOH)
USD 166.6 million - USD 416.4 million	43.4 (-28.5% HOH)
Total	107.0 (-18.6% HOH)

Source: DART and other sources

Table 8

FY 2019 Revenue Distribution

Revenue Range	Number of Companies (▲ indicates a HoH increase; ▼ indicates a HoH decrease)
KRW 100 billion (USD 83.3 million) or more	16 (▲3)
KRW 50 billion - KRW 100 billion (USD 41.6 million - USD 83.3 million)	1 (▼7)
KRW 10 billion - KRW 50 billion (USD 8.3 million - USD 41.6 million)	8 (▲4)
Less than KRW 10 billion (USD 8.3 million)	11 (▲7)
Total	36 (▲7)

Source: Dart and other sources

Key Takeaways

We have analyzed the 36 unlisted unicorns and unicorn candidates valued greater than USD 166.6 million among portfolio companies in the KFoF underlying funds. The findings reveal that the average company is an 8.4-year-old ICT services company generating USD 107 million in revenue for FY 2019, receiving USD 16.6 million in funding and reaching a valuation of USD 561 million as of June 30, 2020.

Compared to our previous analysis, the number of unicorns and unicorn candidates climbed by 7, with 10 new entrants and 3 drop-offs. The average valuation dropped by 4.6% HoH and the average funding amount rose by 10.2% HoH, while the average revenue dipped by 18.6% HoH. The distribution of the unicorns and unicorn candidates by industry is similar to that seen in the prior analysis. Moreover, ICT services, biotechnology/healthcare and distribution/services together represented 83.3% of all the unicorns and unicorn candidates.

We hope KVIC's semi-annual update on the analysis of unicorns and unicorn candidates will assist in designing innovative growth policies for nurturing unicorn companies in Korea.

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 9

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/furniture; real estate/renting and leasing; textiles/clothing/leather; other



K-UNICORNS



Market Watch



- (1) Dable
- (2) Backpackr



K-UNICORNS (I) Dable

Content Discovery Platform

Highlights

- ▶ A content discovery platform that delivers personalized content by tapping big data and artificial intelligence, fundamentally reshaping the relationship among users, media and content.
- ▶ Expanding beyond South Korea and positioning itself as an early mover to market in countries where the media industry begins to grow in earnest.

Company Overview

Dable Inc. is a leading content discovery platform in South Korea. The company name 'Dable' is a coined word that means 'try everything we are able to do with data.' The company's two flagship services are Dable News, which uses natural language processing (NLP), machine learning and other advanced technologies to serve personalized news recommendations, and Dable Native Ad, which delivers customized ads formatted similarly to content. Dable is striving towards hyper-personalization that goes beyond personalization to identify even each individual's short-term interests.

Chaehyun Lee, who is currently the CEO of Dable, had worked at SK Planet before departing on his entrepreneurial journey. There, he had successfully led the in-house venture team that developed big data-based product recommendation platform RecoPick for shopping mall websites and provided it to more than 120 shopping malls including 11STREET, Shinsegae Duty Free and AK Mall, to name a few. Built upon that experience, he founded Dable, a company which provides publishers with a personalized news platform as solution as a service (SaaS) whose implementation requires only the addition of simple scripts and meta tags to their websites. Dable has reached 5.1 billion unique users per month and 50 million active users who have logged in at least once per week for the last four weeks. The company collects and analyzes more than 20 billion logs to track the behavior of users every month through real-time big data processing. It has partnered with over 2,500 media companies. The variety of partners include major publishers, such as Chosun Ilbo, Joongang Daily, MBC, SBS and JTBC, online portals, such as Nate and Zum, online communities, blogs and apps.

Dable has also actively pursued international expansion, thereby providing its services in Japan, Taiwan, Vietnam, Malaysia and Indonesia. The company established its local subsidiaries in Taiwan and

Indonesia in 2018. Also, it will open a local subsidiary in Vietnam this year to speed up its expansion into the local market. As of August 2020, 23 of its 84 employees were working in overseas branches or engaged in overseas operations. With more than 300 media partners abroad, Dable generated approximately KRW 1.8 billion in revenue from overseas operations last year.

Company Brief	
CEO	Chaehyun Lee
Date of Establishment	May 6, 2015
Head Office Location	15F, 431, Teheran-ro, Gangnam-gu, Seoul, South Korea
Number of Employees	84 (as of August, 2020)
Main Services	Content discovery platform Dable News; content marketing platform Dable Native Ad; e-commerce advertising solution Karamel.ai
Contacts	Website: dable.io Blog: http://blog.naver.com/teamdable Careers: https://apply .workable.com/dable/ Email: bizdev@dable.io Phone: +82 070-8265-3336

Market Opportunities

Native advertising or native ad is a part of content marketing and a way of distributing ads that blend into content to avoid annoying consumers. Native advertising is highly effective because it can be targeted more narrowly to specific consumers. U.S. advertisers reportedly spent nearly USD 43.9 billion on native ads in 2019. The ad spending is forecast to grow 20.2% to USD 52.7 billion in 2020, representing 64.8% of total U.S. digital ad spending (eMarketer 2019).

In Korea, 82.5% of social media users have come across native ads. In particular, over 90% of the users in their teens and twenties have encountered native ads, suggesting that native ads are very familiar content for younger generations (2017 Report on Internet Usage, Nasmedia).

Digital channels made up merely 15.6% of the global advertising industry in 2009, but that proportion is expected to rise to 54.4% (TV is projected to account for 27.8%)¹ in 2020. Meanwhile, digital will account for 45.5% of the Korean advertising market in 2020, growing from 42.2% in 2019 and continuing its upward trend.

1) Magna Global, March 26, 2020, Samsung Securities' Report, Media Advertising – Futile Efforts to Ride Out Uncertainty

Dable branched out internationally early on. Just three years from its inception, the company entered the Taiwanese market. Taiwan would serve as a good reference guide for Dable’s foray into China given that it gives wider market access for foreign services and can be a test bed for the Chinese version of a solution. Another attractive market is Indonesia where there is no dominant platform in the rapidly growing media market.

Table 1

A Peek into Global Competitors

	Taboola	Outbrain	PopIn (acquired by Baidu)	Incross (acquired by SK Telecom)
Country	United States	United States	Japan	South Korea
Inception Year	2007	2006	2009	2001
Services	Content discovery platform; native ad	Content discovery platform; native ad	Content discovery platform; native ad	Media representative
Major Partners	NBC; The Huffington Post; GE; Verizon; CNBC, etc.	CNN; Fox News, ESPN; Time	MSN; Forbes Japan	Google; Naver

1. Taboola

Founded in 2007, Taboola is one of the world’s leading content discovery platforms, which provides personalized content recommendations, with 1.4 billion unique users and over 10,000 partners. One of its partners is HuffPost Korea that achieved a 40% uplift in revenue per mille or RPM (revenue earned for every 1,000 ad impressions) and a 60% rise in click-through rate or CTR (the ratio of clicks to impressions) after using Taboola. Last year, Taboola announced its intention to merge with Outbrain, but has called off the planned merger lately. The combined company was initially projected to add USD 2 billion to annual revenue and serve over 20,000 clients. According to Crunchbase data, Taboola has secured USD 16 million in venture funding to date from investors including Comcast Ventures and Fidelity Investments.

2. Outbrain

Outbrain, one of Taboola’s primary competitors, produces 290 billion content discoveries per month in 14 languages across more than 55 countries. To date, Outbrain has raised a total of USD 194 billion in funding from Index Ventures, HarbourVest Partners, Lightspeed Venture Partners and more.

3. popIn

As Asia's biggest native ad platform founded in 2008, popIn has exceeded 10 billion monthly page views in July 2020. Its services are offered mainly in Japan, South Korea, China, Malaysia, Taiwan, Singapore and Indonesia. In 2015, popIn was acquired by Baidu, the number one search engine in China. Since then, it has been endeavoring to provide more sophisticated services by leveraging AI technologies possessed by Baidu that leads the way in the Chinese AI public cloud services market.

4. Incross

Incross principally offers video ad network Dawin as well as digital media representative services (that is, media strategy formulation and advertising execution on behalf of advertisers or advertising agencies). Approximately 70% of the revenue is made up of advertising commissions from digital media representative services. In April 2020, SK Telecom acquired a 34.6% stake in Incross from NHN.

What makes Dable distinctive?

- ▶ Dable more quickly captures user interests through real-time processing of big data and recommends relevant content. The company conducts a content analysis using NLP and machine learning, while making the most of feature extraction technology to identify important attributes from content or deep learning to predict the categories to which content should belong.
- ▶ Dable also uses its proprietary real-time collaborative filtering algorithms to produce recommendations. It continues to improve the personalized recommendation algorithms through machine learning once recommendations are adopted by target users. Dable's A/B testing platform is used to optimize user interface (UI), and multi-armed bandit algorithms are applied to find the best match. Dable has proven its excellence in personalized recommendation algorithms as the company has beaten out the competition in A/B tests.
- ▶ Additionally, its scalable big data platform allows servers to scale up automatically in the event of a sudden or unexpected spike in data traffic to ensure stable service delivery. The stability has been attested by seamless services delivered to more than 2,000 media sites over the past five years.

Main Services

1. Dable News

Dable News is Dable's content recommendation solution that offers high quality, personalized content to users based on their interests. Users are shown content that may intrigue them via a content recommendation widget such as 'You may also like' placed either at the bottom or on the right side of a media site. Dable provides a variety of algorithms for recommending news articles: Personalized News, Related News, Perused News, and Popular News. The Related News algorithm recommends news highly relevant to the news item that a visitor is currently viewing. The Perused News algorithm

recommends news articles that were carefully or completely read by many visitors, taking into account diverse factors such as engaged time on page and news consumption. The Popular News algorithm displays the hottest content by category. Hence, its media partners can use diverse algorithms customized to their needs for each section. Furthermore, Dable offers different types of recommendation widgets, including grid, cross, list, mixed and magazine widgets, to ensure the most effective content exposure to site visitors, and gives UI suggestions suited to the characteristics of a media outlet.

After implementing Dable News, media partners, on average, had 25% higher CTR than when they presented popular articles without relying on the news recommendation solution. Also, page views per visit, albeit to varying degrees across partners, showed a 3% to 9% increase for web, and a 11% (the lowest) to more than twofold rise (the largest) for mobile.

Moreover, Dable provides media publishers with a dashboard reporting tool to help them analyze logs and view statistics for data analysis. The dashboard enables media companies to track information required for media operations, such as the number of visitors, page views, user flow and category-specific traffic. What's more, it allows them to pull up and use news statistics – for example, ‘popular content ranking by age,’ ‘popular content ranking by gender,’ and ‘perused content ranking’ – which helps boost the competitiveness of their sites.

Figure 1

Dable Service



Source: Dable

2. Dable Native Ad

The company's another flagship service is Dable Native Ad. Once Dable News captures and directs the attention of users towards the section of recommended news, then Dable Native Ad exposes users to ads whose UI is the same as that of recommended news appearing in the section of interest. Dable Native Ad draws attention and entices engagement without interfering with content consumption by users and as a result delivers great ad performance. What's notable is that Dable Native Ad enables effective advertising implementation. Unlike conventional native advertising where exposure to an ad is random, Dable Native Ad brings ads highly relevant to users based on user interest analysis, for instance, showing an ad on flight deals to a user who is reading a travel article or exposing a reader who is interested in beauty to a cosmetics ad. The results of testing 58 media sites from April 15 to May 22, 2016 reveal that the media sites saw a 56% uptick in CTR for targeted ads based on interests (which means the use of interest targeting, one of targeting options offered by Dable Native Ad) as compared to CTR for non-targeted ads.

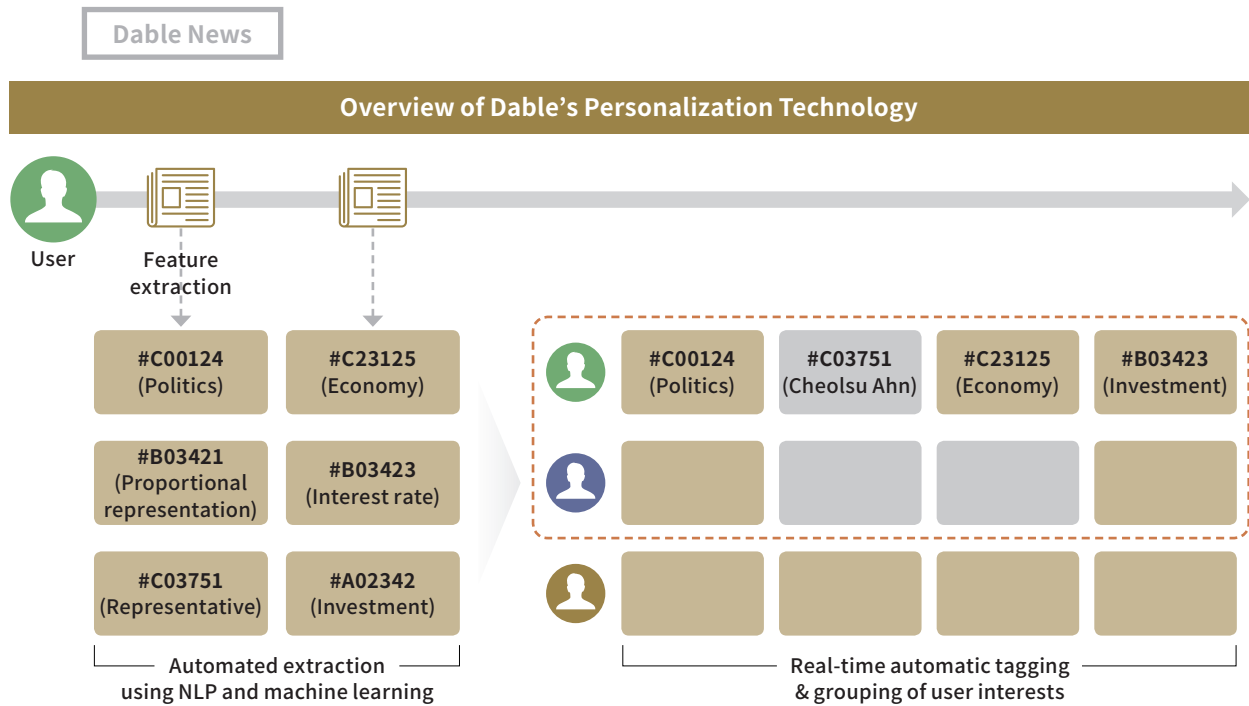
Following more than one year of preparation, Dable has recently launched programmatic ad marketplace Dable Native Ad Exchange based on real-time bidding (RTB). Dable Native Ad Exchange is the backbone system for programmatic buying, which automates the buying and selling of ad impressions. The primary advantage of using the ad exchange is that efficient distribution of ad impressions helps boost ad performance.

The RTB-based ad exchange mediates transactions between participants like ad networks, demand side platforms (DSPs) and supply side platforms (SSPs). Through the exchange, advertisers can have access to a broad range of ad inventories and pick the ad impressions they want to buy, thereby running more effective ad campaigns. Further, Dable Native Ad Exchange enables advertisers not only to target audience according to date/time, location, gender, device and interests, but also to spend their advertising budget on ads that drive viewers to take desired actions, such as high CTR ads, engaging ads or high converting ads.

Dable Native Ad Exchange boasts the largest native ad demand in Asia. While it has more than 2500 premium media partners in Asia, including South Korea, Taiwan, Japan, Indonesia, Vietnam, and Malaysia, it is also connected to other ad exchanges at home and abroad such as Kakao Ad Exchange, Google Ad Exchange, and MSN Ad Exchange. Dable Native Ad Exchange allows advertisers to bid on billions of ad inventories around the globe and display their ads on the websites of Kakao, Google, MSN or other publishers.

Figure 2

Current State of Dable News Usage



Dable's Accumulated Know-How

- 7** years
Operating the personalization platform for 7 years from February 2013
- 510** million unique users
Unique users who are measured monthly
- 50** million active users
Deep behavior profiling of users²
- 1.8** billion behavioral logs gathered
Collecting and learning 1.8 billion behavioral logs each month

Dable makes the most of machine learning technology to sort and process huge volumes of data in real time.

Number of user behavior logs collected by Dable

- 1.8** billion per month
- = 600** million per day
- = 25** million per hour
- = 410,000** per minute

The diagram shows a three-step machine learning process for fraud detection: 1. Real-time statistical fraud detector, 2. Statistical fraud detector, and 3. Deep-learning fraud detector. It also includes visualizations of 'Sample space of Abusers' and 'Visualizing abusers (3-14)'. A text box states: 'Now, we got three type of shields/weapons.' The visualizations show various data points and patterns related to abusers.

Source: Dable

² Number of active users who have logged in at least once a week in the past four weeks

3. Karamel.ai

Karamel.ai is a personalized advertising solution developed exclusively for e-commerce, which delivers a combination of personalized product recommendation and retargeting advertising services. If e-commerce clients run retargeting ad campaigns through Karamel.ai, they can use the personalized product recommendation solution free of charge.

Using the recommendation solution, Karamel.ai shows e-commerce site visitors similar items to consider (substitutes) and products frequently bought together (complements) with the aim of increasing ecommerce conversion rates. On top of that, when the customers visit other sites, it exposes them again to ads on the products in which they showed interest on the previously visited e-commerce site, in order to encourage the customers to return to the site and purchase the recommended products.

Unlike text-rich news sites, shopping mall sites are packed with images, implying that these sites do not contain enough metadata to generate personalized recommendations. For that reason, Dable employs its proprietary technology to serve more accurate recommendations in addition to commonly used collaborative filtering technology in the field of personalized recommendations.

Collaborative filtering is a technique used to find users who are similar to user A and recommend the products that user A liked to the similar users - in other words, it recommends items users will probably like based on similarities between users and/or between items. To offer product recommendations, Karamel.ai calculates the similarity between products with the addition of weights to the user's different behaviors, such as viewing products, adding products to the shopping cart, and making a purchase, while taking into consideration which page the user took such action on as well as trade-offs between relevance and recency.

Meantime, Karamel.ai delivers retargeting ads that are optimized by analyzing customers' buying journey (funnel analysis). Based on data obtained from the analysis of customers moving through the five stages of awareness, familiarity, consideration, purchase and loyalty, it recommends products with high conversion rates to defected customers to win them back. Karamel.ai also segments users into groups according to gender, age and products they have bought, and then expose products that match each customer segment's needs and preferences so as to attract potential customers to make purchases.

Business Model /Funding

1. Revenue Model

In its nascent stage, Dable provided publishers with its personalized content recommendation solution Dable News and charged them monthly fees based on traffic volume. As Dable News played a role in spurring more news consumption and keeping readers longer on the site, many publishers shelled out monthly fees to incorporate Dable News into their websites.

However, the situation changed after the arrival of top global content recommendation platform Taboola in the Korean market. Taboola made its personalized recommendation solution available for free to its publisher partners. Instead of charging monthly fees as with Dable, it generated revenue from ad exposure occurring where news recommendations are displayed, and shared ad revenue with the publishers. With Taboola, publishers can not only use the free personalized recommendation solution but also earn additional ad revenue.

Faced with the changing market conditions, Dable rolled out Dable Native Ad, embracing the same business model as Taboola. That is to say, the company adopted the new business model to generate ad revenue from Dable Native Ad, rather than receiving monthly fees in return for the provision of its content recommendation solution to publishers.

Dable Native Ad exposes users to ads that look like their surrounding news content. Advertisers pay each time a user clicks one of the ads. It is considered a highly efficient and less irritating advertising tool because users perceive native ads as part of news content. Currently, revenue from Dable Native Ad accounts for 97% of the company's total revenue.

For Karamel.ai, a flat fee was initially charged per month for the personalized product recommendation solution (flat-rate pricing). After realizing that the solution subscription fee was considered an expense by e-commerce companies whereas advertising was considered an investment to attract new customers, Dable launched a retargeting ad solution for e-commerce clients, and changed the pricing model by giving clients free access to the personalized product recommendation solution if they spend at least KRW 1 million on retargeting ads.

2. Revenue Growth

In 2019, Dable posted KRW 18.4 billion (USD 15.3 million) in revenue, growing a CAGR of 35% over the last three years from just KRW 80 million in its founding year of 2015. It is worth noting that the company's revenue surged 87% year-over-year in the first half of 2020 thanks to the rise of news consumption during the coronavirus pandemic.

Since it started to expand internationally in 2017, Dable has gradually carved out its position in overseas markets, leading to rapid revenue growth. The company crossed the KRW 100 million mark in monthly overseas revenue for the first time in June 2019. Looking at the full year of 2019, its overseas revenue reached KRW 1.7 billion, registering a growth rate of 32% per month on average. Taiwan, in particular, delivered strong revenue growth, accounting for 87% of the total overseas revenue. Dable expects about KRW 7 billion revenue to come from Taiwan in 2020.

3. Funding

Dable has successfully raised about KRW 8 billion(USD 6.6 million) over three funding rounds to date from leading domestic investors.

The first seed round of about KRW 1 billion was led by Kakao Ventures (formerly K Cube Ventures) and SK Planet in 2015. In addition, Dable secured nearly KRW 1 billion in a Series A round from Stonebridge and Kakao Ventures in 2016 and KRW 6 billion in a Series B round in 2018. The company has attracted a strong group of VC investors that include NHN Payco, Cheil Worldwide, and DSC Investment as well as seed and early-stage investors Kakao Ventures and Stonebridge.

Table 1

Funding

Stage	Year of Funding Round(s)	Funding Amount	Investors (VC)
Series B	2018	KRW 6 billion	DSC Investment; NHN Payco; Cheil Worldwide; Stonebridge; Kakao Ventures
Series A	2016	KRW 1.12 billion	Stonebridge; Kakao Ventures
Seed	2015	KRW 1.1 billion	Kakao Ventures; SK Planet
Total		KRW 8.22 billion	

Strategies Going Forward

Geared towards becoming Asia's No. 1 content discovery platform

Dable's services are now being offered in Asian countries including Japan, Taiwan, Indonesia, Vietnam and Malaysia outside its home country. Overall, the company has successfully built a local presence in those countries, which heralds accelerating growth in the years to come although the pace of growth varies across the countries. Dable has plans to hire more local employees and work closely with local media companies and advertising agencies in the countries it is currently serving in order to continue its growth abroad. Moreover, it will continue to make a foray into Hong Kong, Singapore and more to establish and sustain a strong presence in Asia.

Plans for 2H2020

- Set up a local subsidiary and expand its operations in Vietnam: There is no market yet for content recommendation solutions in Vietnam, although major media companies serve news recommendations and native ads on their own. Since Dable commenced its services in Vietnam, it has been growing at a fast pace, forming partnerships with over 70 local media companies. The company plans to establish its local subsidiary in the second half of 2020 to ensure more stable expansion into Vietnam.

- Gain traction for Karamel.ai service: Karamel.ai was initially designed to offer a personalized product recommendation solution only. Recently, however, Dable started to provide a retargeting advertising solution as part of Karamel.ai service. The company currently offers the service to Handmade, Decoview, ODE and other partners, planning to pick up the pace to attract more clients in the latter half of 2020. Also, it will prepare to provide Karamel.ai. to overseas e-commerce companies given noticeable e-commerce market growth in other Asian countries such as Indonesia and Taiwan aside from South Korea.

Leadership



CEO Chaehyun Lee

- 2015: Established Dable Inc.
- 2011–2015: Served as Head of SK Planet's RecoPick team
- 2010–2011: Developed NHN (currently Naver)'s search engine crawlers.
- 2008–2009: Developed LG Uplus' next-generation browser.
- 2007: Research intern, NASA Ames Research Center
- Education: B.S. and M.S. in Computer Science and Engineering, POSTECH
(He graduated at the top of his undergraduate class)

Company Awards & Achievements

- 2020: Selected as one of companies in the SW High Growth Club 200.
- 2019: Received the Minister of Science and ICT Award for its outstanding achievements as one of startup companies under the K-Global Program aimed to help Korean startups expand globally.
- 2017: Won the TIPS Award (TIPS: Tech Incubator Program for Startup).
- 2016: Received the 2016 Korea Online Advertising Grand Prize.
- 2015: Selected as the first Asian recipient of incubation from Campus Seoul, Google's first start-up incubator facility in Asia; Chosen as a global partner participating in the IBM Catalyst Startup Program.

It was during his NASA internship that Chaehyun Lee became interested in starting his own venture. However, he soon realized that it would take at least ten years for the technology, which was his research subject then, to bring positive impacts to the lives of the majority of people, even though it could deliver meaningful value. To develop technology that can immediately affect people's lives, he started his career working as a developer at a prominent telecommunications company. Later, Lee joined Naver (then NHN), developing search engine crawlers. This naturally led him to explore the fields of big data platform and recommendation. Search engines enable people to easily find information they are looking for, which is another epoch-making advance in the world. The advent of a new era of content discovery through recommendations makes it possible to provide not only content that users seek but also content that they do not realize they may find interesting, thereby reshaping the relationship among users, media and content. Chaehyun Lee as the CEO of Dable is deeply committed to giving everyone access to content discovery service with Dable's world-class big data processing and machine learning technologies, regardless of different levels of technology adoption across people, companies or countries.

K-UNICORNS (2) Backpackr

Backpackr, an operator of idus, South Korea's indisputably leading online handmade marketplace

Highlights

- ▶ Boasting the largest share of the Korean ecommerce market for handmade goods.
- ▶ Showing overwhelming growth underpinned by customer loyalty as it successfully built 'fandom commerce' that connects artists and customers (fans).

Company Overview

Backpackr Inc. operates idus, the largest marketplace leading the way in the South Korean handicrafts market. idus is an online platform on which artisans can list and sell their handmade crafts and goods. This online marketplace quickly gained traction by connecting artists and crafters with almost nowhere to sell their handmade items online with consumers looking for unique and creative goods. Currently, nearly 21,000 artists run their stores on idus, selling over 300,000 creations under more than 30 categories ranging from handmade accessories and handmade clothing to homemade food.

Backpackr was founded in 2012. After a few years of its concentrated effort to develop a paid app, the company launched its flagship app called idus in 2014 and has since grown in tandem with the Korean handmade market. Beginning in 2018, it experienced steep increases in the number of app downloads, the number of artisans who set up their shops on idus, and merchandise sales volume. The idus app recently surpassed 10 million downloads with the repeat purchase rate of over 85%. And idus's gross merchandise sales volume more than doubled each year, reaching KRW 100 billion (USD 83.3 million) in the first half of 2020 and KRW 310 billion (USD 258.2 million) on a cumulative basis. On the back of this rapid growth, idus has successfully positioned itself as the number one marketplace platform for handmade products in the country.

The company's growth has been accelerating recently. As contact-free interactions (so called "untact") become the new normal during the COVID-19 pandemic, more attention is being drawn to online hobby classes available on idus, which the company has newly launched this year. With its annual gross merchandise sales target of KRW 200 billion for 2020, Backpackr intends to grow into an unparalleled platform for handmade products that will provide idus artists with a variety of support for their revenue growth while delivering the best experience to customers.

Company Brief	
CEO	Donghwan Kim
Date of Establishment	November 19, 2012
Head Office Location	12 Donggyo-ro 19-gil, Mapo-gu, Seoul, South Korea
Number of Employees	Approx. 150
Main Service	Online handmade marketplace 'idus'
Contacts	Website: https://www.idus.com/ Email: biz@backpac.kr Google Play Store: https://play.google.com/store/apps/details?id=kr.backpackr.me.idus Apple App Store: https://apps.apple.com/kr/app/%EC%95%84%EC%9D%B4%EB%94%94%EC%96%B4%EC%8A%A4-idus/id872469884

Market Opportunities

Changes in consumption patterns are the biggest factor facilitating the recent rise of handmade marketplaces. As the consumption of small, affordable luxury goods has become a visible trend these days and consumers increasingly pursue idiosyncratic one-of-a-kind products, handmade products have been brought into the limelight.

Behind the spread of such trends are i) the rising tendency of people to fit work into their life, not the other way around, and seek to do something they love, which are part of the “MZ generation (millennials and generation Z)” characteristics; ii) the growing self-actualization needs of workers having more free time thanks to the adoption of a 52-hour workweek; iii) the tendency of people to look for income sources apart from their job because of earlier retirement amid an increase in average life expectancy; iv) the expansion of infrastructure (e.g., online shopping sites, social media sites, marketing tools and seller communities) available to artisans and creators working alone. These changes herald a new era of side jobs, suggesting that many people think about quitting their day jobs and turning their hobbies into full-time jobs. This is in line with the global trend towards a gig economy.

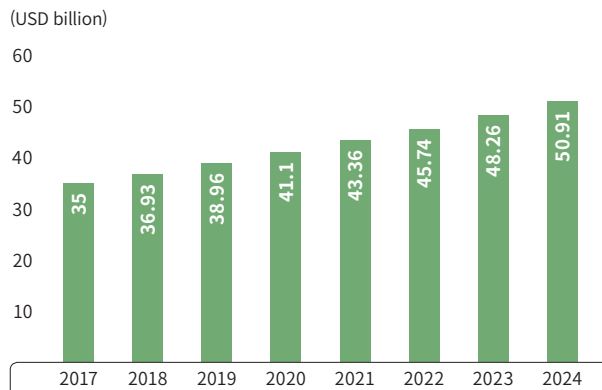
Handmade products are made to order in small quantities but in a wide variety of styles. Due to these characteristics, the handmade market is difficult for ecommerce giants to enter, resulting in the absence of online marketplaces dedicated to selling and buying handmade crafts. In many cases, individual handmade sellers register as a business or open a store at one or more online shopping sites, or use blogs or social networking sites to market and sell their products directly to buyers. The production quantity of handmade crafts is limited because craft producers usually work alone. This means that handmade sellers don't have to rely on multiple channels if they can make enough sales through a particular channel. That's why online platforms like idus may have strong competitive advantages. Finding

this niche, Backpackr launched idus as an online sales channel for handmade products that are less accessible to consumers than manufactured goods in an offline environment. The emergence of idus has led to greater market access and expanded market scale, spurring innovation in the local handicrafts market. In practice, no meaningful player other than idus exists in the Korean ecommerce market for handmade and handcrafted goods. Through its outstanding growth driven by highly loyal sellers and buyers (4.7 app rating and 43% app retention rate), idus has become the first online marketplace that comes to mind when Korean consumers want to buy handmade products.

The global arts and handicrafts market reached a value of approximately USD 35 billion in 2017. The market value is projected to hit USD 51 billion by 2024. The Korean handicraft industry posted total sales of KRW 4,253.7 billion (USD 3.5 billion) in 2018, up 19.7% from the sales figure in 2016 (Korea Craft & Design Foundation, 2019 Handcraft Industry Survey). In addition, roughly 20,000 students with crafts and related degrees graduate from domestic universities each year, indicating abundant potential workforce in the industry.

Figure 1

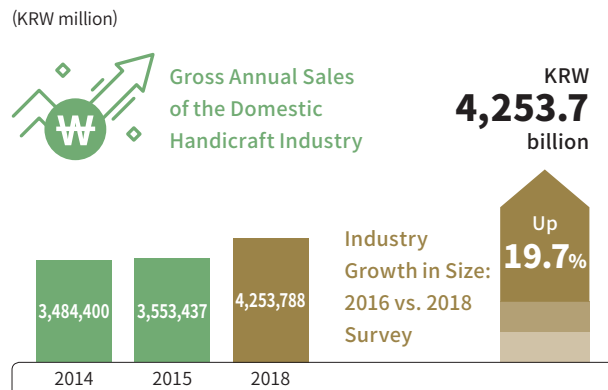
Value of the Global Arts and Handicrafts Market



Source: Statista

Figure 2

Gross Sales Revenue of South Korean Handmade Businesses



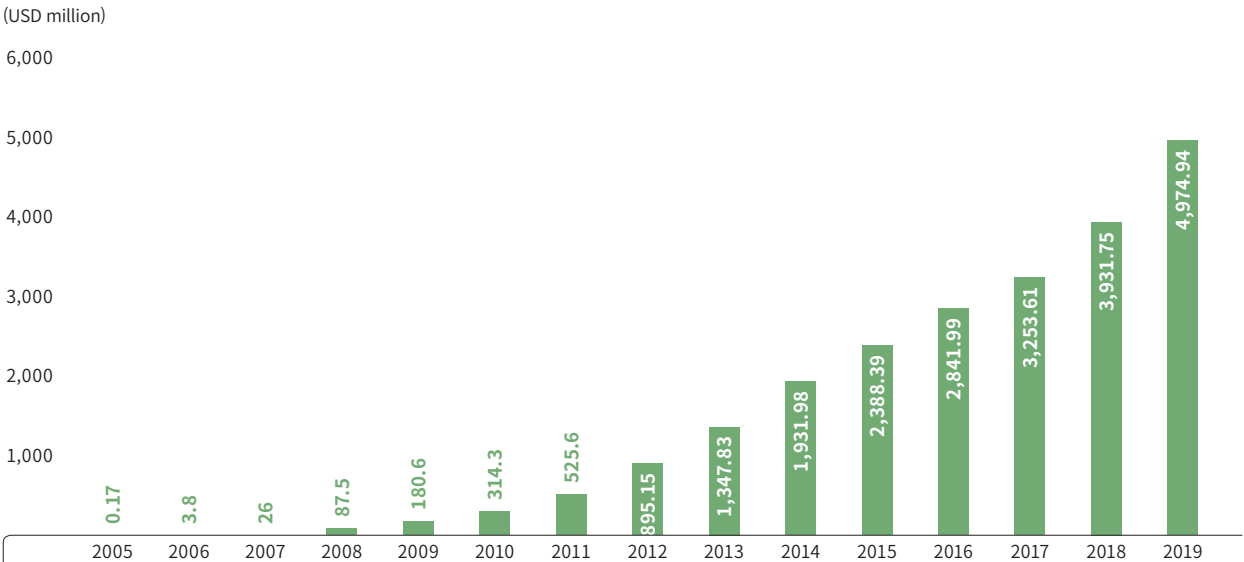
Source: Korea Craft & Design Foundation (KCDF), 2019 Handcraft Industry Survey

A Peek into the Success of Global Peer Etsy Inc.

Founded in the United States in 2005, Etsy is the world’s largest online marketplace for handmade goods, primarily offering a wide selection of crafts, art, jewelry, accessories, craft supplies and vintage items. It currently operates in over 200 countries around the world. The company acquired multiple platforms like A Little Market, a French online platform for handmade items, and Reverb, a used music gear platform. In 2018, it entered into a referral agreement with DaWanda, the biggest platform for handmade products in Europe, inducing DaWanda’s sellers and buyers to migrate to the Etsy platform. As described earlier, the company has already expanded into the European markets. As of June 30, 2020, Etsy had 60.3 million active buyers and 3.1 million active sellers with about 65 million items listed on the marketplace. The company has continued its rapid growth, reporting USD 4.7 billion in gross merchandise sales volume in 2019. Following its debut on the Nasdaq stock market in 2015, its market capitalization as of December 2020 is around USD 20.6 billion. The company’s revenue comes mainly from marketplace activities and other optional services. The fees a seller pays for market activities include listing fees, transaction fees, payment processing fees and more. In the meantime, Etsy offers other optional paid services for sellers, such as Etsy Ads and Etsy Shipping Labels.

Figure 3

Annual Gross Merchandise Sales (GMS) of Etsy Inc. from 2005 to 2019



Source: Statista

Main Services

1. Handicraft ecommerce platform called idus

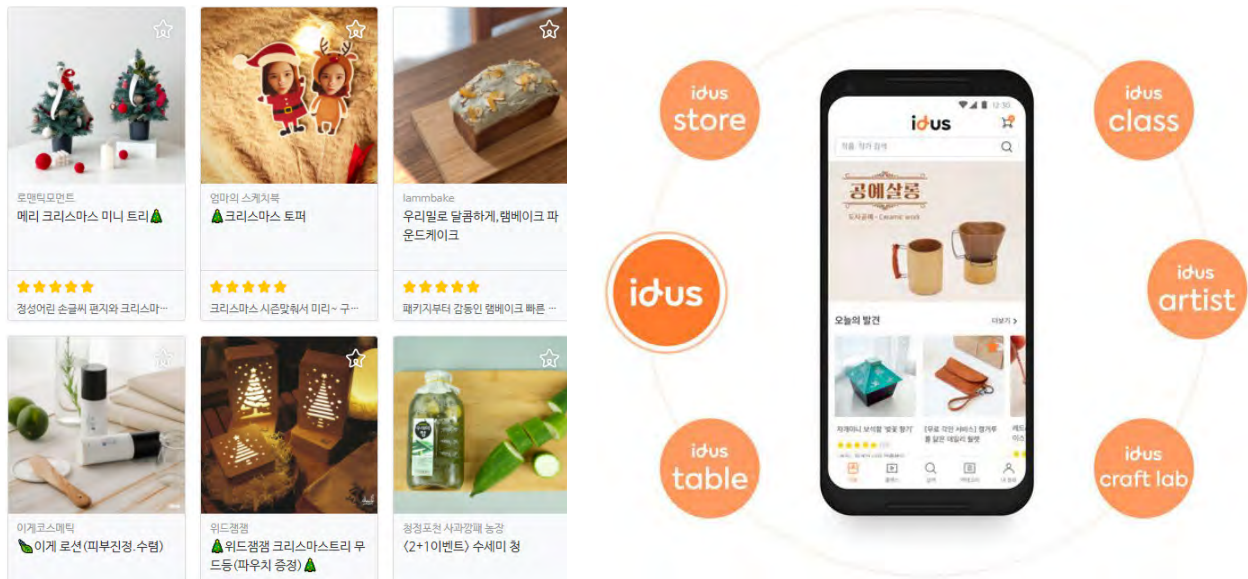
idus makes it easier for artisans and artists to create a product listing by allowing them to just add several product photos and a description because writing detailed product descriptions is not an easy task. It also enables shoppers to easily sort and find products by the date listed, favorite or sales volume. The front page of idus contains the sections of “Real-Time Updates on Products Purchased” and “Real-Time Product Reviews” to help shoppers make better choices. Moreover, the majority of handmade products on idus are made-to-order items because handmade items are difficult to stock up on well in advance. In the previous app-driven service environment, most users were customers with a strong intention to purchase handmade goods. However, the addition of the website allows idus to attract a lot of customers looking for products (e.g., home-grown produce, meat and fish products) other than handmade items. 50% of idus users are consumers in their twenties and 90% of the users are women. The rate of repeat purchases within a month is nearly 85%.

In 2020, idus’s monthly active users and average monthly merchandise sales reached 4 million and KRW 14.9 billion, respectively. The top 10% of idus artists reported monthly merchandise sales of roughly KRW 10 million. The number of new artists joining idus has been on a rapid rise. The online craft marketplace recently saw the rise of a star seller who generated monthly merchandise sales of KRW 300 million by making and selling handmade custom cakes.

Artisans and creators are required to apply for opening an idus store and get through the company’s seller eligibility screening. Once admitted as a registered seller, they can list and sell their products on the online marketplace using idus seller app. Seller eligibility requirements are not easy to satisfy. Although some artisans and craft producers are recruited by Backpackr or are referred by existing idus artists to the company, most artisans need to apply for seller registration and pass the screening. Less than 10% of applicants are admitted on average. The screening process weeds out sellers of machine-made products or low quality handmade goods to ensure that a high level of quality is maintained. The screening criteria include the quality of product photos, creativity, degree of completion or perfection, market competitiveness and aesthetic/artistic expression. For fresh food products, sellers are required to make or ship fresh foods right after customers place their orders. If a seller accumulates a certain number of penalty points for non-delivery disputes, he or she will be kicked off the platform. idus does not allow sellers to delete customer reviews under its policy because customer reviews are used to check product quality. The platform has accumulated 1.91 million reviews.

Figure 4

Today's Recommended Items



Source: Backpackr

2. Online/offline handmade classes called Geumson Class (also known as idus Class)

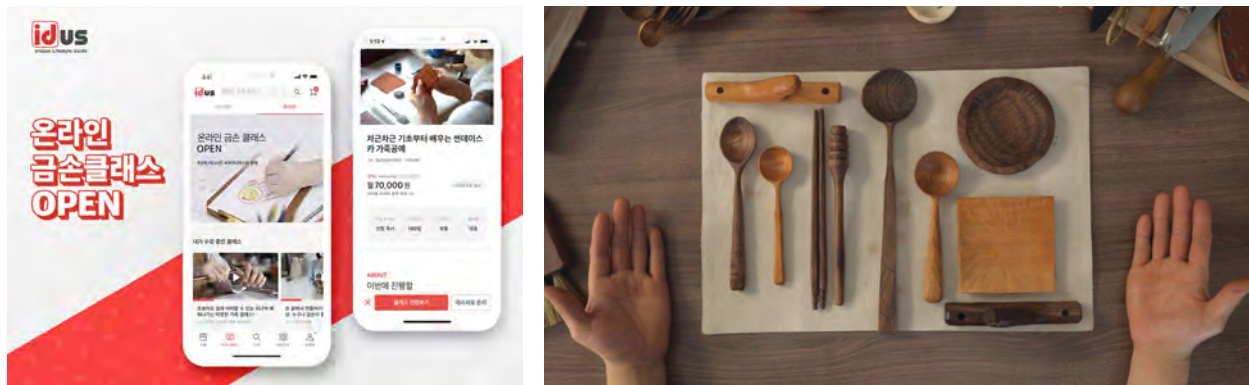
Online learning classes are gaining steam as more and more people stay at home in the ‘untact’ era. Backpackr launched idus craft classes collectively called Geumson Class – Geumson means crafty hands - to introduce more people to craft courses and nurture craft artists. To make that happen, it acquired mobile content company FAVE and expanded the online education segment. idus offers a wide range of handmade classes including baking, leather craft, stained glass painting, clay craft, French embroidery, drawing, silk screen printing, bracelet watch making, and custom glass cup making. High quality curriculum and instruction from experienced artists help participants develop their talents and gain craft skills, so they can be good and skilled enough to become a craft artist if they are eager to work hard.

Furthermore, the idus platform enables artists to open and deliver craft workshops or classes either online or at their studios. If artists upload pre-recorded video lessons produced at their small studios to the platform, users can take any of the classes they sign up for in the same way as they do other online classes.

To take Geumson Class, users need to log in to idus via desktop, mobile web or iOS/android app and purchase the desired online class. The duration of an online class is usually six months. idus also sells craft supplies for online classes. As of December 2020, there are over 100 online classes and thousands of offline classes for sale on idus.

Figure 5

Online Geumson Class (a.k.a. idus Class)



Source: Backpackr

3. Other

SNS idus is not only a marketplace but also a community where individuals are connected to each other and reveal something about themselves. The platform enables artists to tell stories about themselves and their brands through their profiles and to communicate with buyers through comments and messages using the app's SNS features like "Talk" and "Story." With idus, shoppers can follow artists they are interested in, and artists can post their production process, new product launch teasers and daily lives. This indicates that idus is the "conversational fandom commerce" platform. Nearly 15% of idus customers tend to pay more for handmade items than the price listed as a way of supporting artists they like. This naturally leads artists to proactively manage their relationships with customers. Consequently, as evidenced by a very few complaints found in roughly 1.9 million customer reviews, Backpackr has been able to greatly reduce customer service costs, which account for a significant proportion of ecommerce business. What's more, it benefits from indirect marketing as artists promote idus as their sales channel when they promote and market their creations via external channels such as blogs and social media sites.

VIP Club VIP Club is a paid membership program for shoppers. If shoppers pay an annual fee of KRW 30,000 to become a VIP Club member, they can receive free member shipping benefit for an order over KRW 10,000 per store. Although offering free shipping benefits costs the company more than KRW 30,000 per member per year, VIP club members spend three times more than non-VIP members. Accordingly, the VIP Club membership program creates opportunities to upsell customers, thereby boosting commission revenue.

Artist Support Services Backpackr provides a range of support for idus artists including seller training, free studio photo shooting, and provision of logo and packaging design services without a markup. It also offers materials and supplies for production, packaging and shipping at prices lower than the lowest on the internet. Further, it runs idus Craft Lab, a craft co-working space, as part of its efforts to nurture and support craft artists. This lab provides independent workshop rooms, common work space, a photo studio and more for artists and crafters who are struggle to find and obtain their own working space.

Offline Stores The company opened dining pub idus Table, which serves homemade food for sale on idus, in Mapo-gu, Seoul. The dining pub's main menus are based on homemade food, farm-grown produce, meat and fish for sale on idus with a wide selection of cocktails using Korean traditional liquor and homemade beers. The pub space can be leased out for a small event or exhibition. idus Table offers a 10% discount on the main menu items for idus members and a 20% discount on the bill for idus artists.

Moreover, Backpackr started idus Store, a flagship store that showcases and sells idus products (fashion accessories, ceramics, home decoration items, etc.) offline. There are three idus Stores in the Seoul and metropolitan areas.

Figure 6

idus Store and idus Table



Source: Backpackr

Business Model /Funding

Backpackr has two core businesses: idus, the ecommerce platform for handmade products, and Geumson Class, which encompasses online and offline craft classes. With the recent acquisition of Tumbbug, a crowdfunding platform for creative arts, the company plans to develop a new platform for artist sponsorship.

Looking at idus’s fees and commissions policy, there are two types of payment plans for artists. The online marketplace charges a monthly fixed membership fee of KRW 50,000 plus 15% commission per sale plus payment gateway (PG) fee (i.e., payment processing fee) for artists using a membership plan, and a 22% sales commission plus PG fee for non-member artists with no monthly fixed fee. idus seems to take lower commissions than other vertical ecommerce platforms. For big online shopping sites, the commission rates hover between 25% and 30%. Ecommerce marketplaces charge sales commissions in the low 10% range, but it is difficult for sellers to get more exposure unless they pay additional fees for advertising.

Backpackr has raised a total of KRW 51 billion (USD 42.5 million) in funding to date, including KRW 5 billion in 2014, KRW 16 billion in 2018 and KRW 30 billion in 2020 from angel investors and VCs in and outside of South Korea.

Fees & Commissions		Ads & VIP Club
Artist under the Membership Plan	Artist	
KRW 50,000 per month + 15% sales commission + PG fee	22% sales commission + PG fee	Artist referral (KRW 3,000 per referral) VIP Club (KRW 30,000 per year)

Strategies Going Forward

Since the rollout of idus in 2014, Backpackr has also launched idus Store (offline marketplace), idus Craft Lab (co-working space), idus Table (dining pub) and idus Class (online video craft class).

The company recently opened a tech center in Backpackr Gangnam Camp with the aim of strengthening its technological capabilities to keep pace with the rapid business growth. It plans to focus on such core capabilities as machine learning-based recommendation and search in order to broaden services that reflect the tastes of users. Additionally, it went through rebranding, releasing new business identity and updating services as part of its plan to enhance brand awareness. This plan is ultimately intended to deliver more diverse handmade experiences to customers.

In 2020, Backpackr began ramping up its international expansion, one of the company's business goals. It has been working on recruiting overseas artists and crafters, though such efforts slow down due to the outbreak of the COVID-19 pandemic. On top of that, it has been developing an app for local artists and artisans to sell their works online to a global audience. The launch of the app under development is slated for next year. The company presses on with its strategy to make it possible for local shoppers to buy handmade goods from international artisans and vice versa, thereby stimulating the Korean handicraft industry in the long run. Backpackr CEO Donghwan Kim said, "our mission is to provide our artists with improved environment and our customers with better services. We will strive to help local artists and makers go global and make the supremacy of the Korean handicraft industry known to the world."

Leadership



CEO Donghwan Kim

- 2012 - Present: CEO, Backpackr
- 2009 - 2012: Ensign Media
- 2007 - 2009: Service Planning, Daum

“Needless to say, it is a tough market to survive and thrive for a startup, even for any business with large capital.” Backpackr CEO Donghwan Kim heard that one many times when he started his business and approached potential investors with his business idea through his ceaseless attempts to meet them. No investor wanted to invest in an online shopping mall for handmade and handcrafted products, which encourages people to slow down in an era where faster and cheaper delivery becomes a necessity for the survival of ecommerce. He also faced skepticism from artisans and crafters when he tried to convince them to sell their handmade goods on an online handmade marketplace, which existed only on paper at that time. No one believed in him and his app idea as an app was not built yet. Although everyone shook their heads, idus has grown incredibly. It has become the online marketplace for craft artists and small businesses who were unable to find sales channels while giving hidden crafters and creators the wings to fly. This would not be possible if Kim gave up halfway when he faced rejection from investors in the early stage of his venture. He founded Backpackr on the belief that creating a slow but valuable handmade culture would be worth a lifetime.

MARKET WATCH

Korea Venture Investment Corporation
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