![EDISON]

Takung Art

A piece of the art action

Initiation of coverage

Retail

Takung Art's online art trading platform has already established its proof of concept. The business model has been honed over recent months, with consequent impact on the financial results for FY17. However, the fundamentals are very attractive, based on the rapidly growing Chinese middle class with its strong appetite for art, collecting and shared ownership. Introducing other collectibles, such as sporting memorabilia, and adding C2C trading is also set to drive top-line growth. Takung has built a scalable platform that should support this broader and more international vision. The share price does not yet reflect this potential.

Year end	Revenue ($m)	PBT* ($m)	EPS* ($)	DPS (c)	P/E (x)	Yield (%)	EV/EBITDA (x)
12/16	19.1	9.5	0.66	0.00	3.0	N/A	1.0
12/17	12.9	(1.1)	(0.15)	0.00	N/A	N/A	N/A
12/18e	15.8	1.2	0.08	0.00	25.1	N/A	5.8
12/19e	19.4	4.4	0.29	0.00	6.9	N/A	2.1

Note: *PBT and EPS are normalised (EPS fully diluted), excluding amortisation of acquired intangibles, exceptional items and share-based payments.

FY17: A year of transition

Having set up Takung in 2012 and generated profits in FY14-16, management reviewed the business during 2017 and assessed its ability to deliver sustainable returns and build scale. The result of this process was a set of priorities focused on building the user base, diversifying the products traded on the platform and internationalising the business. Driving user numbers involved a greater emphasis on high-quality portfolios by recognised artists, as well as listing new categories of collectibles.

Building a bigger and better business

The move to higher-value portfolios is already having a beneficial impact on both revenues and profitability, with Q118 starting strongly. The first platform offerings in collectibles (golden historic newspaper copies and signed football shirts from names such as Gerrard, Ronaldo and Messi) have been successfully launched. Our modelling suggests a recovery building through FY18, with good margin growth continuing in FY19. Rising retail commissions and further listings of sports memorabilia underlie our forecasts for growing revenues. The tech platform is scalable and overhead recovery should improve with top-line growth.

Valuation: Considerable potential upside

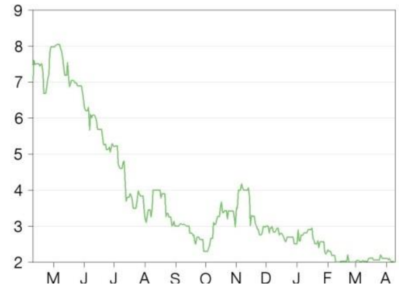
Valuation is complicated by the group's recent transformation, which is still at an early stage, and the lack of true peers. There are few quoted art market stocks with earnings forecasts, making the normal metrics unreliable. Looking at art businesses and other online retail/gaming and trading platforms suggests that Takung's shares could trade significantly higher. DCFs run on our modelling (which does not include benefit from newer ventures or identified opportunities) imply a lower value. These two approaches average out at $3.63. Evidence of further successful new listings and increased levels of platform trade should support our forecasts and provide catalysts for share price appreciation.

11 April 2018

Price	**US$2.01**
Market cap	**US$23m**

Net cash ($m) at 31 December 17 (non-restricted)	12.5
Shares in issue	11.3m
Free float	16.6%
Code	TKAT
Primary exchange	NYSE
Secondary exchange	FRA

Share price performance



%	1m	3m	12m
Abs	(0.8)	(28.7)	(71.5)
Rel (local)	4.1	(26.3)	(74.7)
52-week high/low		US$8.04	US$2.01

Business description

Based in Hong Kong, Takung Art Company provides a secure and easy way for art collectors and investors to acquire shared ownership in Asian and other fine art - including paintings, calligraphy, jewellery and precious gems - and participate in the booming international art market without fear of price manipulation and forgery.

Next events

Q1 figures	May 18

Analysts

Fiona Orford-Williams	+44 (0)20 3077 5739
Bridie Barrett	+44 (0)20 3077 5700

media@edisongroup.com

Edison profile page

Takung Art is a research client of Edison Investment Research Limited

Investment case

Aiming for market-leading position

Takung's mission statement states: "We aim to become the premier shared ownership brand for art and culture investment in the world". This is obviously ambitious, but should inform the trajectory of the group's development.

Growing Chinese upper-middle class stage one audience

Based in Hong Kong, the business is effectively transacted in mainland China. The NYSE American listing adds credibility and reflects the broader global ambitions. Meanwhile, there is a very large market to address within the existing remit, with a proven and growing appetite for:

- art;
- shared ownership;
- trading; and
- collectibles, especially in relation to globally-recognised sporting icons.

Takung has put together an IT platform for trading fractionalised ownerships (comparable to units in a mutual fund), which enables investors to buy and sell units on a matched-bargain basis.

Platform in place

The group has invested to build a robust and scalable platform. It has also moved onto a second iteration of its business model emphasising higher quality portfolios that should give it greater scope to scale up the number of retail investors and increase liquidity on the platform – which in turn should attract more (and more valuable) business. It also has put in place strategic partnerships with trade bodies and associations that give an important credibility endorsement.

FY17 costs of realignment

The changes to the business model invoked to build a more sustainable business with greater growth potential caused inevitable upheaval but also had secondary impacts. There was churn in the authorised agent base, as they were encouraged to shift the type of portfolio being offered up-market and become more commercial, and some were unable to comply with the new requirements. Many clients of those agents paid monthly fees that covered all commission from trades and once the related agents no longer dealt with Takung, these clients no longer paid their dues, leading to a $1.8m bad debt provision. The upheaval pushed the group into loss for FY17.

Strong balance sheet with cash coming through

Takung has net cash on the balance sheet, albeit reduced by the changes described above. Our modelling shows net cash at end FY18 of US$11.7m (from $12.5m at end FY17), building in FY19 to $12.9m based on the existing business model. This is, however, a young company, with ambition and determination and may make further changes along the way.

Valuation yet to reflect opportunity

Applying traditional metrics to a business still at an early stage of development can be distortive, but it is clear that other businesses with some overlapping characteristics trade at more than double Takung's current valuation. Our DCF modelling (details below) suggests a less ambitious valuation. An average of peer-based valuation (year one and year two EV/EBITDA estimates) and DCF suggests a level of around $3.63. The group will need to demonstrate that its reconfigured business model can deliver the promised growth and margin improvements to justify a rating at these levels.

Company description: Art and collectibles trading

Takung Art has three elements to its business; Takung Unit, which is an online trading and shared ownership platform for units in Asian and international fine artworks; Collectibles (Unit+), which is a trading platform featuring portfolios comprising multiple copies of sports memorabilia and other collectibles, both Asian and international; and Takung Online, which is a more 'traditional' eCommerce platform for artists to sell directly to the buying market. Takung Unit is the original business and contributed 98% of FY17 revenues.

Takung is based in Hong Kong, with wholly owned subsidiaries in Shanghai and Tianjin and was founded in 2012. A further office was opened in Hangzhou in FY17 and technology development is based there. The group listed on the NYSE American in March 2017, having reversed into a public shell in October 2014.

Takung business model

Takung Unit is the core of the business and is an online platform that allows items or portfolios of fine art to be listed and shares in their ownership to be traded. This allows the original owners the opportunity to share in the future increase in value of their portfolio.

The group appointed a number of authorised agents whose role was (and is) to identify artworks and art portfolios, to get them professionally appraised and then bring them to Takung with a view to listing them on the platform. Takung's own staff then carry out a further appraisal to determine of the work or works are suitable for marketing and are likely to appreciate in value. If these conditions are met, then, subject to all the necessary paperwork being in order, Takung will list the artwork on its website and divide the ownership into shares of equal value, based on its view of the underlying value. These are valued at HK$1, so a work valued at HK$1m would have one million HK$1 shares. Their subsequent value is determined by the supply and demand for those shares when listed on the platform.

Takung has three sources of revenue:

- Listing fees. Typically between 22.5% and 48% of the offering price plus a refundable listing deposit of approximately 20% of the listing price. This is higher than would traditionally be charged by an auction house, which typically charges a greater sum to the buyer than the vendor.
- Trading commissions. These are of two types:
  - Fixed monthly fees, for which a selected VIP trader can carry out as many or few transactions as they like on specified artworks. VIP traders are identified by the authorised agents and confirmed by Takung, which will then negotiate the level of fee on a case-by-case basis; or
  - Transaction commissions, typically charged at 0.2% on each side of the bargain. The intention is to increase this to 0.3% on each side as the business reaches a greater level of maturity. These are accounted as revenue and deducted from the proceeds of each completed transaction.
- Management fees. These cover practical aspects of the arrangement, such as insurance, storage and transportation of the artworks. Takung may also receive annual fees from those agents authorised to list products on the company's platform.

The artworks that are listed remain in secure storage for 10 years, after which they are sold and the proceeds paid to the unit holders in proportion to the number of units held. The first such realisation will be in FY23, 10 years after the first artwork was listed. The value of the units in trading should give strong guidance to the level of demand which will in turn determine the realisation price. One of the key attractions for the owner of an artwork is that they can opt to retain a proportion of the ownership, up to 20%. Other routes, such as private sale or sale by auction, inevitably involve a complete disposal, which may be a less attractive proposition to an owner who anticipates that a work will increase in value.

Fractional ownership and trading is a new concept in this context, although obviously very well established in financial markets. There have been some recent moves to trade fractional ownerships in real estate, but we are not aware of any existing or planned other operators in the art and collectibles markets. We would conclude that the IT platform is replicable. Establishing the necessary relationships with the relevant stakeholders (artists, agents and traders) would be more of an issue.

Client access to the platform is via an app that is available for download from the company's commercial website.

Takung has negotiated a number of important partnerships that function both as introducers of business and as external validation for the credibility of the offering. These include; China National Arts and Crafts Society/Huangshan Arts Association; Russian Artists' Society; Union of Mongolian Artists; China Cultural Heritage Foundation on the art side. In sports memorabilia, it has partnerships with PNH Group, a manufacturer and distributor of sportswear (football in particular) that in turn has partnerships with major clubs such as Juventus, Manchester City and Paris St. Germain and organisations such as the FA and FIFA. It also partners with 5USports, the exclusive partner of Icons.com in Asia and an online sports portal and sports marketing organisation that took a 60% stake in Northampton Town FC during 2017.

Access to the platform was extended to residents of Russia, Mongolia, Australia and New Zealand in 2016 and three Russian portfolios of paintings and 15 Mongolian paintings are now listed on the platform.

As of December 31, 2017, Takung had 241 art listings trading on its platform, with an aggregate initial listing value of US$58.0m. Management attests that most of the listed pieces and portfolios have traded actively and shown significant appreciation since their introduction on the site. The purchase and sale of ownership units of Takung's listed artwork generated a total transaction value of US$17.3bn in FY17 versus US$9.4bn transacted in the prior year, with over 2bn units traded per month in 2017. The trader population registered with site exceeds 170k.

Building a brand in shared ownership of art and collectibles

During FY17, Takung carried out an appraisal of the business as it had developed to identify the drivers of profitable growth. The group had grown its revenue base fast over the years since inception but the income was not necessarily of particularly high quality, with the average value/listing having been in decline. Liquidity of certain portfolios on the platform was a particular issue. To address this, management has put into place a strategy to attract a larger and more diverse user base to the platform. This has involved a degree of churn in the user base as it has adjusted to the new priorities.

- The first key move was to put in place the '**A' Tier**. This was implemented in July 2017 with the aim of improving the quality of the market offering, moving it up the price brackets and increasing the levels of liquidity in trading through having a larger number of part-owners of each work. This in turn is designed to attract more 'serious', VIP traders onto the platform. The short-term impact of these listing criteria changes was to reduce the number of listings. As the authorised traders have either changed the type and value of potential listings or walked away, there have been a couple of quarters of reduced activity in terms of new listings, but this is reported to be recovering in the early weeks of FY18. The move upmarket has also improved the group's ability to forge valuable and prestigious partnerships, such as those outlined above.
- The second strand of the development strategy has been to look to **diversify** the product streams. In Q317, Takung launched its Unit+ offering. This is a trading platform specifically for collectibles and was announced alongside the partnership with PNH. The first collectible offering on this platform was a reproduction of China's oldest active newspaper in gold. Its first

sports memorabilia offering was a signed Steven Gerrard replica football jersey during Q417, which was oversubscribed by more than 30x and that increased in value by over 50% on the first trading day. Unlike the Unit trading platform, traders in Unit+ can accumulate enough units to exchange for a part of the trading portfolio, ie one shirt for 1,800 units in this example. In January, Takung added Lionel Messi jerseys, which were again oversubscribed, this time by 35x. This came through the partnership with 5USport.

These two elements (Unit/'A' Tier and Unit+) give Takung a strong proposition to cater for investors and traders in high value items.

- Takung has also been working to build a strong eCommerce business for lower value items. Takung Online was launched in June 2017 and enables artists to sell entire works directly to buyers. Typical listing prices are from $200 to $15,000, significantly below the valuation price point for the realigned Unit business. The platform is designed to allow the artist to set up their own online retail frontage and set their own prices. The artist is responsible for setting fees and commissions, which would typically be between 1% and 10% of the transaction value, which are deducted from the proceeds. Fees were waived during the implementation and establishment phase and we have assumed only a small contribution in our modelling (see Financials section, below) until stronger indications of its success are showing. The group hopes to roll out Takung Online to the US market, where it believes that the 125 Chinese artists already with a presence on the website will find a ready market. Again, we are not yet building this into our forecasting.

Having offers at different price points should allow Takung to appeal to a wider range of people of different demographics and build out its user base, which will enable it to scale and increase its market visibility.

- The group has started to invest in the development of **blockchain** technology to facilitate the registration of unit ownership. This will enable a full record of all transactions to be maintained and preserved and improve the transparency of the process. It will also help authentication and remove opportunities for fraud. This in turn will enhance the levels of trust between the platform and the traders and encourage others to participate. Blockchain could in time also provide an opportunity for art owners to part-realise the value in their collections. It could also mean that funds could be raised on an existing portfolio to grow out the collection or to reinvest proceeds elsewhere and diversify the asset base.

Takung's long-term aspiration is to become the 'go to' web site for art and collectibles.

Management well versed in art and finance

The management team is headed up Di Xiao, who has been in the art investment and consulting industry since 2008 and has considerable experience across different trading models and potential pitfalls in the industry. He joined Takung Art Company as CEO in January 2013. Previously he had been general manager at Hangzhou LuxTimes Culture and Art Company, for four years, again in China. Before that he had worked as a director of an electronics company, specialising in marketing development.

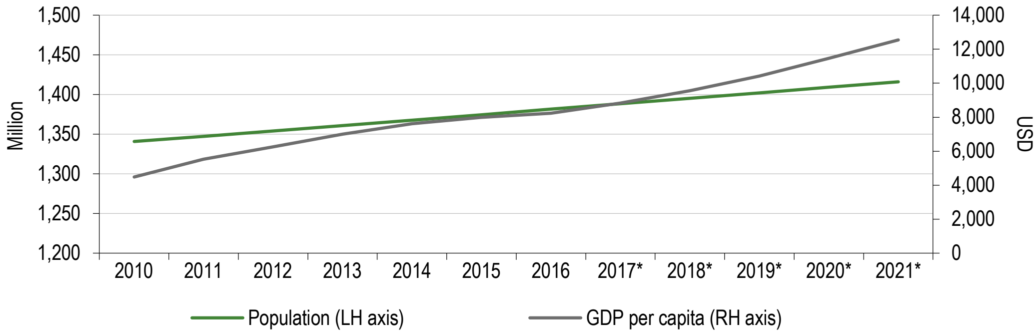
The CFO is Leslie Chow, who is a qualified certified public accountant in the US, having trained at Deloitte & Touche LLP in the US. He joined Albeck Financial Services in 2009, becoming an MD in 2011 and a partner in 2014. Since 2015, Leslie Chow has been an NED for two Hong Kong-listed companies, PPS International and Golden Power Group. He acted as a consultant to Takung Art from 2015 before being appointed CFO in February 2016.

Management holds 1.9% of the equity. The largest (and only substantial) shareholder is listed as Sun Yan, who holds 33.4%.

Strong demographic backdrop

Growing population, growing middle-class, growing wealth

Exhibit 1: China – growing population, growing wealth



Source: IMF, CEIC

There are four key drivers of consumption in China: economic growth; demographic changes; technology; and consumer attitudes. All these factors are very pertinent to the backdrop for Takung Art to build a significant business.

The key constituency for Takung's offering as it now stands is the growing Chinese middle classes. As the Chinese economy has developed, the growth in per capita GDP has grown at a faster pace than the population, as shown in the exhibit above. This accompanies a growing urbanisation of the population and a different set of spending priorities. World Economic Forum figures suggest that over the next decade, consumption will grow at a CAGR of 6% and that the middle class will consist of 65% of all households.

Sharing economy a more developed concept than the West

The process of urbanisation in the population has led to a squeeze on the availability of some resources and a consequent growth in sharing applications, boosted by advances in accessible technology. This is already well established in terms of transport, but has been spreading across to other areas of the economy. Extending the concept to art looks logical in a context where full ownership of assets is less of a cultural objective.

Interest in art…

Chinese investors have long been a major influence on the art market, with their presence or absence driving valuations across Europe and North America in particular. The regular Art Basel/UBS/Arts Economics review of the Art Market shows that Chinese investors participating in art auctions globally vacillate, coming second or third by value behind the US and the UK. In 2017, China accounted for 21% by value of the documented art market, behind the US at 42%, but ahead of the UK at 20%. Transactions amounted to $13.2bn, boosted by the performance at auctions, with Poly Auctions and China Guardian the third and fourth largest global players after Sotheby's and Christies.

…married to an enthusiasm for trading

Gambling is illegal in mainland China and in Hong Kong, barring state-run lotteries, but permitted in Macau and with current proposals being put together for Hainan Island. Trading, on the other hand, is enthusiastic. Futures trading in the commodities markets was heavy, with record volumes, but volatile in 2016. In December 2016, regulators approved the first commodities options. Regulators have been compelled to raise exchange fees in order to clamp down on speculators.

…and a love of football and basketball

Chinese President Xi Jingping has a well-attested enthusiasm for football and the government has set goals for the country to become a major force in the global game by 2050, starting at grass roots level. Basketball is long-established and also very popular in China. In 2015, the NBA signed a c $700m, five-year deal worth with Tencent for the Chinese digital streaming rights to its games. This compares with a three-year deal for the Chinese television rights to the English Premier League in 2016, which cost $650m.

Sensitivities

There are a number of sensitivities to the financial performance, both external and company-specific. We particularly identify:

Macro issues

Population. Takung is providing a service that caters to a particular segment of the population, currently in Hong Kong and mainland China. The dynamics of this audience are described above. Their discretionary income will be dependent on economic and political factors, which may influence their willingness to participate in the ownership of art.

Currency. Takung Art is based in Hong Kong and its core customer base is in that territory and in mainland China. The group is listed in New York, US, and the financial results are reported in US dollars. There are both transactional and translational impacts on the reported numbers, which may be significant.

Market issues: for many years the international art market (and those for other tradable collectibles, such as fine wine) has suffered from the presence of a large number of fakes, with fraud regularly uncovered. China has been particularly highlighted in this respect, alongside prevalent issues such as last payment and non-payment to auction houses. Takung Art seeks to avoid issues of doubtful authenticity through using its authorised agents with their market experience and expertise, with the additional scrutiny of works in-house before they are listed on the platform, with provenance and accompanying paperwork thoroughly checked prior to acceptance.

Art as an asset class: Takung Art's ambition is for art to build as an alternative investment asset class. To some extent this has been established already, but the limited liquidity in the market has been a significant handicap to its gaining traction. Takung's approach of fractionalised ownership may prove to be the solution to the liquidity hurdle.

Company specific

Platform risk: the platform has been built out and has proved that it is fit for purpose. Maintaining a fully functional platform with negligible downtime is crucial to Takung's business proposition.

Data security: all web-based businesses accumulate large quantities of data, but there are added risks when a platform is using individual clients' financial details for them to trade. Exemplary data handling practices will be essential to maintain the necessary trust between Takung and its clients.

Managing balance between the interests of traders, agents and artists: the group has a number of stakeholders, whose interests may not necessarily align. This has been clearly shown with the move to shift agents to delivery of higher-value portfolios in the 'A' Tier, which disrupted both the agent and the client base.

Risk of reputational damage: high standards of protocol for assessing the authenticity of listed works and items are essential to avoid reputational damage that might undermine trust from participants.

Ensuring good flow of listings to maintain site traffic: Takung has to drive both the level of trade carried out on the platform, which it has addressed by changing the type of portfolios listed, and the number of new listings. This is essential to driving listing fee revenue, but also to keep the level of interest from the market at a high level to attract new traders.

Success of new ventures: the group has made its first moves into memorabilia with the listings of signed replica sports shirts and with facsimiles of early, important newspapers. Continued success in this Unit+ area is the main driver of revenue growth in our model.

Obtaining relevant authorisations: for Takung to succeed in other markets and to make the transition to a genuine alternative investment asset class, it will need to gain authorisation from the relevant financial market authorities. There are no guarantees that an application of this sort would be successful. If it was, however, this would be a genuinely transformative opportunity. It should be borne in mind in this context that Takung Art had to undergo certain due diligence to list on NYSE.

Valuation

Peer group context

An externally validated valuation for Takung Art is complicated by the lack of genuine comparators quoted on the world's stock markets. Given that the business model has changed considerably over the last year, it is effectively very early stage in its current form, with the associated risks. Its business model represents a combination of interests that are partially represented across a range of different peer groups. We have looked at the valuation in the context of three types of quoted companies: art-related stocks; online gaming; and investment/trading platform stocks.

The connection with the art stocks is self-evident, although the degree of overlap is limited. The other clear issue with valuing Takung by comparison with the quoted art-based peers is the paucity of financial information and forecasts in the sector, making the ratings unreliable. The inclusion of Etsy, which trades at a significant premium, is also a distorting factor.

Exhibit 2: Global listed art-related stocks

Name	Price (reporting currency	Market cap (m)	Hist EV/Sales last (x)	EV/EBITDA last (x)	EV/EBITDA FY1 (x)	EV/EBITDA FY2 (x)	P/E last (x)	P/E FY1 (x)	P/E FY2 (x)	EBITDA margin last (%)
Artnet (€)	3.42	19	1.0	23.6			26.3			4.2
Sotheby's (£)	49.58	2,603	3.3	16.6	12.9	11.3	22.1	19.7	16.8	19.6
Art Vivant Co	647.00	10,005	1.6	10.8						15.7
Seoul Auction Co	9,060.00	153,273	3.5	26.6			43.3			13.2
Redbubble (A$)	1.85	387	2.1			42.3				(5.3)
Cafepress (US$)	1.35	23		1.4						(6.8)
Etsy (US$)	27.97	3,398	7.0	78.5	26.4	21.2	50.2	67.1	49.4	8.9
Average			**3.1**	**26.2**	**19.7**	**24.9**	**35.5**	**43.4**	**33.1**	**7.1**

Source: Bloomberg, Edison Investment Research. Note: Prices as at 4 April 2018.

We also feel it is appropriate to look at Takung in the context of online gaming and online casino. This is not because we regard trading in art as a direct alternative but rather that there are similarities in driving large numbers of retail traders (or gamers, in this context) to the platform to participate regularly. Since there are a very large number of quoted companies in this market segment, we have not listed them here but have shown the average rating on these metrics.

Exhibit 3: Global online gaming stocks

			Hist EV/Sales last (x)	EV/EBITDA last (x)	EV/EBITDA 1FY (x)	EV/EBITDA 2FY (x)	P/E last (x)	P/E 1FY (x)	P/E 2FY (x)	EBITDA margin last (%)
Average			**3.1**	**15.4**	**10.7**	**9.0**	**29.1**	**17.9**	**17.3**	**23.6**

Source: Bloomberg, Edison Investment Research. Note: Prices as at 4 April 2018.

Takung also has aspects of its business that are far more akin to retail financial platforms. We have included Autotrader in this bracket as an information and matched bargain trading business.

Exhibit 4: Global trading and investment platform stocks

	Price - reporting currency	Market cap (m)	Hist EV/Sales last (x)	EV/EBITDA last (x)	EV/EBITDA 1FY (x)	EV/EBITDA 2FY (x)	P/E last (x)	P/E 1FY (x)	P/E 2FY (x)	EBITDA margin last (%)
Envestnet	55.70	2,491	3.9	33.7	17.4	14.5	374.0	30.3	25.0	11.6
Swissquote Group	57.90	891					21.2	20.3	17.6	38.5
Morningstar	94.75	4,027	4.2	14.8			26.0			28.6
Dun & Bradstreet Corp	114.92	4,262	3.2	11.9	10.5	10.1	16.8	14.0	13.5	26.5
IHD Markit	47.52	19,000	6.3	22.7	15.2	14.0	42.1	20.9	18.4	28.2
Interactive Brokers	64.79	26,674	16.7	24.7	21.7	18.5	28.7	31.1	27.9	67.4
Autotrader	3.46	3,286	11.2	17.2	15.8	14.6	22.1	19.7	17.6	67.8
Average			**7.6**	**20.8**	**16.1**	**14.3**	**75.8**	**22.7**	**20.0**	**38.4**

Source: Bloomberg, Edison Investment Research. Note: Prices as at 4 April 2018.

Exhibit 5: Summary peer groups

	Hist EV/sales last (x)	EV/ EBITDA last (x)	EV/ EBITDA FY1 (x)	EV/ EBITDA FY2 (x)	P/E last (x)	P/E FY1 (x)	P/E FY2 (x)	EBITDA margin last (%)
Art average	3.1	26.2	19.7	24.9	35.5	43.4	33.1	3.1
Gaming average	3.1	15.4	10.7	9.0	29.1	17.9	17.3	23.6
Financial average	7.6	20.8	16.1	14.3	75.8	22.7	20.0	38.4
Average of the above	4.6	20.8	15.5	16.1	46.8	28.0	23.5	21.7
Discount by 30%	**3.2**	**14.6**	**10.9**	**11.2**	**32.8**	**19.6**	**16.4**	**15.2**
TAKUNG ART	**0.8**	**N/A**	**5.7**	**2.0**	**N/A**	**25.9**	**6.8**	**N/A**

Source: Edison Investment Research

We have discounted the average by 30% to reflect the comparatively short trading record and the small relative size of the group. As can be seen above, the conclusions are very different according to which metric is used, with a considerable discount opening up when looked at on a year two basis. A 10.9x Y1 EV/EBITDA multiple would indicate a share price of $2.78 while the average Y2 EV/EBITDA of 11.2x indicates an equivalent value of $5.95 (note, EV/EBITDA for the average art stocks increases in year two as Redbubble contributes to the average, to the extent that the three-sector average also rises). These two values themselves average out at $4.37. This exercise demonstrates that the current price is factoring in a high element of execution risk and relatively low earnings visibility.

Sense checks from DCFs

We have looked at two different types of DCF; a traditional calculation and a reverse version that varies mid-term FY20-27 EBITDA margin and growth rate.

Exhibit 6: DCF varying WACC and terminal growth rate

		------------------Terminal growth rate------------------				
		0.00%	1.00%	2.00%	3.00%	4.00%
-------------WACC-------------	14.00%	2.24	2.31	2.39	2.49	2.60
	13.50%	2.33	2.41	2.50	2.61	2.74
	13.00%	2.43	2.51	2.62	2.74	2.89
	12.50%	2.53	2.63	2.75	2.89	3.06
	12.00%	2.64	2.76	**2.89**	3.05	3.26
	11.50%	2.77	2.90	3.05	3.24	3.48
	11.00%	2.91	3.05	3.23	3.45	3.73
	10.50%	3.06	3.22	3.43	3.69	4.03
	10.00%	3.23	3.42	3.66	3.96	4.38
	9.50%	3.41	3.64	3.92	4.29	4.79

Source: Edison Investment Research

Taking a WACC of 12% and a terminal growth rate of 2% and our using our short-term forecasts prior to the mid-range assumptions, of 10% revenue growth and an EBITDA margin of 25%, the DCF model indicates a share price of $2.89, a 32% premium to the current price. We show below how this varies if different assumptions are made about mid-term revenue growth and EBITDA margin.

Exhibit 7: DCF varying EBITDA margin and mid-term revenue growth

		-----------------EBITDA margin-----------------				
		21.00%	23.00%	25.00%	27.00%	29.00%
------------Rev growth------------	5.00%	1.78	2.04	2.30	2.56	2.82
	6.00%	1.86	2.13	2.41	2.68	2.96
	7.00%	1.93	2.23	2.52	2.81	3.10
	8.00%	2.02	2.33	2.64	2.94	3.25
	9.00%	2.10	2.43	2.76	3.09	3.41
	10.00%	2.20	2.54	**2.89**	3.24	3.58
	11.00%	2.29	2.66	3.03	3.39	3.76
	12.00%	2.40	2.79	3.17	3.56	3.95
	13.00%	2.51	2.92	3.33	3.74	4.15
	14.00%	2.62	3.06	3.49	3.93	4.36

Source: Edison Investment Research

The mid-point between the two derived share prices of $4.37 from the peer comparison and $2.89 from the DCF is $3.63.

Financials

Takung Art reports its financial results quarterly.

Three key elements to revenues

Takung Art derives its revenues from three core sources:

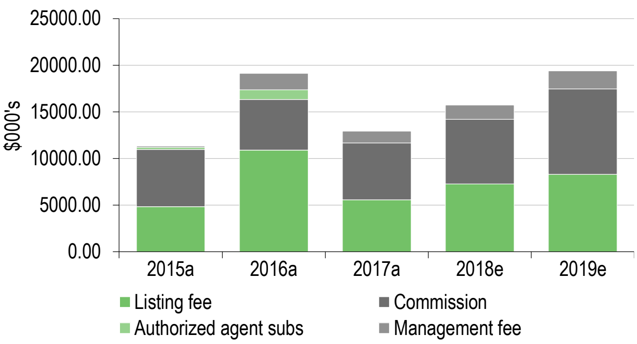
- artists and/or agents looking to list works or portfolios on the platform and paying listing fees;
- commission earned from traders' transactions in the units on the platform; and
- management fees paid by artists and/or agents to cover matters such as storage and insurance.

Listing fees will typically be between 22.5% and 48.5% of the offer price and become due when the shares start trading on the platform.

In 2015, there were 43 new listings; in FY16 the number rose to 132. In FY17, however, the number was scaled back to 58 within the traditional Unit business as the focus of the business was set to higher-value portfolios that would generate greater sustainable trader interest. There were also two listings in H217 in the Unit+ collectibles category – one of football jerseys and one of vintage newspapers. The initial football jersey offering of a replica Steven Gerrard shirt gained strong market traction and by mid-January 2018 had traded over $650k by value. Subsequently, Takung has listed replica jerseys from Lionel Messi and Cristiano Ronaldo, which have also stimulated very high levels of interest.

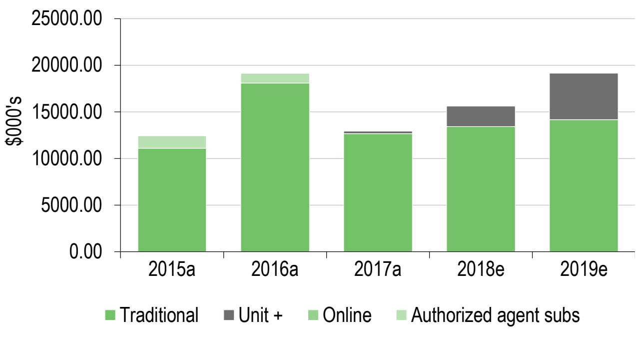
Our model anticipates that listing fee revenue resumes its progress in FY18, with the bulk of the growth coming from further offerings of collectibles, particularly of sport-related memorabilia in Unit+, as shown by the exhibits below. Management indicates a good pipeline. The changes are already having a positive impact on the result, with listing fees in January 2018 168% higher year-on-year at $790k. This includes the Messi and Ronaldo jerseys, along with eight art portfolios with an average listing value of $220k.

Exhibit 8: Revenue split by type



Source: Company accounts, Edison Investment Research

Exhibit 9: Revenue split by business area



Source: Company accounts, Edison Investment Research

Commission revenue should naturally increase if the number of portfolios listed increases, provided that traders are sufficiently interested in the works or items on offer (still to be demonstrated). This relationship should become more transparent with the shift in the user base that has been actioned over the last year. Historically the commission revenues were biased towards the VIP traders associated with the authorised agents. These individuals would pay a monthly subscription that allowed them to trade as frequently as they liked. The revised emphasis on portfolios of greater importance and financial worth was put in place to build the retail trade. This underlies the forecast growth in commissions over the remainder of FY18 and FY19. The trader population registered with the platform is now more than 180k.

The changes to the remit of the authorised agents over H217 resulted in some not continuing their relationships with Takung Art, either from choice or from not being in a position to offer the type of portfolio that is now being accepted for listing. A minority of the VIP traders who were associated with these agents then stopped paying their monthly subscriptions and at the year-end the outstanding balance had reached c $1.8m, which had previously been recognised on billing and included in total revenue figures reported for earlier quarters. This sum has now been written off the uncollected receivables and the revenue recognition policy has been changed to avoid any repetition. Revenue from retail traders continues to be recognised on its collection.

Management fees simply reflect the number of total listings on the platform, with some slight variations in the charges depending on the nature of those works or items.

Two further initiatives may stimulate revenues for FY18 but are not sufficiently certain to yet be built into our forecasts. These are:

- Listing an important work by a well-recognised Western artist. This could be significant in driving brand recognition well beyond the group's existing reach and raising the profile of the entire concept of the trading of part-ownerships of art and collectibles.
- Launching Takung Online, the group's e-commerce platform, in the US. This would initially involve the sale of works by Chinese artists already using the platform into the US market.

The cost of sales line includes the internet service fee, but also the depreciation and amortisation of the hardware and software of the trading platform. Gross margin was 90% in FY17, down from 93% in FY15 and 94% in FY16. We model a modest recovery in FY18 to 92%, then maintaining that level.

In terms of costs, FY17 saw a shift in emphasis from sales and marketing to general and administrative expenses, primarily consisting of salaries. With the new market strategy now in place, we would expect the sales and marketing figure to increase as the group looks to recruit new participants (agents and retail investors) onto the platform. The forecast revenue growth built into our model more than covers the increase in overhead, with normalised operating margins recovering from the -8.4% delivered in FY17 to 4.5% in FY18e and 19.7% in FY19e. The operating margins achieved in FY15 and FY16 were at a higher level but were clearly unsustainable.

Total revenues for Q118 are expected by management to be around $4.0m, compared to the $2.3m generated in Q417. It also expects to return a profit on this turnover for the quarter. We have not attempted to make adjustment in our figures for future currency movements and have used a tax charge of 25% for both FY18 and FY19 (the PR China corporate tax rate). This results in forecast earnings per share (adjusted, diluted) of 8 cents for FY18 rising strongly to 29 cents for FY19.

Operating cash flow set to recover

With the peak of spending on building the business infrastructure past, we anticipate that there will be a modest net cash outflow in FY18 before the group turning net cash flow positive in FY19.

Comfortable cash on the balance sheet

Takung Art had $12.5m of net cash on its balance sheet at the end of FY17. This figure does not include restricted cash of $25.3m, up from $21.7m at end FY16 (matched with equivalent liabilities). The short-term borrowings from third parties are there to ensure that the Hong Kong-based company has sufficient US dollar currency available to meet its working capital obligations, secured by equivalent RMB loans (shown on the balance sheet as Loan Receivables), which are repaid in parallel. The $12.5m net cash figure comprises cash and cash equivalents of $11.9m plus loan receivables of $7.8m less short-term borrowings of $7.2m (there being timing differences with the loan matching across the FY17 year-end). For future years we assume that the loan receivables and the short-term borrowings are equal sums. Our model indicates a small net cash outflow in the current financial year, to end FY18 with a net cash position of $11.7m, rising to $12.9m by end FY19, equivalent to 50 cents per share.

Exhibit 10: Financial summary

$'k	2015	2016	2017	2018e	2019e
31-December	GAAP	GAAP	GAAP	GAAP	GAAP
INCOME STATEMENT					
Revenue	11,336	19,143	12,922	15,750	19,400
Cost of Sales	(806)	(1,129)	(1,247)	(1,190)	(1,494)
Gross Profit	10,530	18,014	11,675	14,560	17,906
EBITDA	7,833	9,779	(338)	1,713	4,825
Normalised operating profit	7,496	9,255	(1,081)	713	3,825
Amortisation of acquired intangibles	0	0	0	0	0
Exceptionals	0	0	0	0	0
Share-based payments	(314)	(813)	(751)	(250)	(250)
Reported operating profit	7,182	8,443	(1,832)	463	3,575
Net Interest	0	(202)	(601)	(200)	(150)
Other income	14	416	577	637	705
Joint ventures & associates (post tax)	0	0	0	0	0
Exceptionals	0	0	0	0	0
Profit Before Tax (norm)	7,510	9,469	(1,104)	1,150	4,380
Profit Before Tax (reported)	7,033	8,140	(719)	900	4,130
Reported tax	(1,282)	(1,769)	(343)	(225)	(1,032)
Profit After Tax (norm)	6,228	7,411	(1,631)	863	3,285
Profit After Tax (reported)	5,750	6,371	(1,062)	675	3,097
Minority interests	0	0	0	0	0
FX translation adjustment	0	(1,082)	763	0	0
Discontinued operations	0	0	0	0	0
Net income (normalised)	6,228	6,329	(868)	863	3,285
Net income (reported)	5,750	5,289	(298)	675	3,097
Basic average number of shares outstanding (m)	9,601	10,641	11,078	11,200	11,200
EPS - basic normalised ($)	0.65	0.70	(0.15)	0.08	0.29
EPS - diluted normalised ($)	0.64	0.66	(0.15)	0.08	0.30
EPS - basic reported ($)	0.60	0.60	(0.10)	0.06	0.28
Dividend ($)	0.00	0.00	0.00	0.00	0.00
Revenue growth (%)	140	69	(32)	22	23
Gross Margin (%)	93	94	90	92	92
EBITDA Margin (%)	69	51	(3)	11	25
Normalised Operating Margin	66	48	(8)	5	20
BALANCE SHEET					
Fixed Assets	1,357	2,696	3,262	3,262	3,262
Intangible Assets	144	21	22	22	22
Tangible Assets	1,213	2,065	2,191	2,191	2,191
Investments & other	0	610	1,049	1,049	1,049
Current Assets	28,118	39,166	41,732	45,327	51,452
Restricted cash	16,195	21,743	25,274	27,801	30,581
Debtors	185	3,059	2,292	3,072	4,541
Cash & cash equivalents	10,769	13,395	11,867	11,650	12,877
Other	968	968	2,300	2,804	3,453
Current Liabilities	18,427	30,603	34,911	37,580	40,360
Creditors	16,863	22,712	26,906	29,575	32,355
Tax and social security	1,564	550	313	313	313
Short term borrowings	0	6,309	7,209	7,209	7,209
Other	0	1,032	484	484	484
Long Term Liabilities	45	0	0	0	0
Long term borrowings	0	0	0	0	0
Other long term liabilities	45	0	0	0	0
Net Assets	11,002	11,259	10,084	11,009	14,355
Minority interests	0	0	0	0	0
Shareholders' equity	11,002	11,259	10,084	11,009	14,355
CASH FLOW					
Op Cash Flow before WC and tax	7,833	9,779	(338)	1,713	4,825
Working capital	(2,765)	(3,591)	(4,001)	(1,142)	(2,121)
Exceptional & other	0	1,896	4,381	1,445	705
Tax	1,317	(3,025)	(1,830)	(1,032)	(1,032)
Net operating cash flow	6,384	5,059	(1,789)	983	2,377
Capex	(512)	(1,412)	(814)	(1,000)	(1,000)
Loan payables/ loan receivables	0	(66)	0	0	0
Net interest		(435)	(526)	(200)	(150)
Equity financing	3,511	0	0	0	0
Dividends	0	0	0	0	0
Other	(631)	1,032	1,000	0	0
Net Cash Flow	8,752	4,178	(2,129)	(217)	1,227
Opening net debt/(cash)	(2,022)	(10,769)	(13,461)	(12,492)	(11,650)
FX	(5)	(1,552)	1,360	0	0
Other non-cash movements	0	66	(199)	(625)	0
Closing net debt/(cash)	(10,769)	(13,461)	(12,492)	(11,650)	(12,877)

Source: Company accounts, Edison Investment Research

EDISON

Contact details	Revenue by geography
Flat-RM 03-04 20-F Hutchison House 10 Harcourt Road Central, HK T: 852-3158-0977 fr@takungae.com	China 100%

Management team

Chairman and CEO: Di Xiao	CFO: Leslie Chow
Mr. Xiao has been in the art investment and consulting industry since 2008 and is familiar with all forms of art dealings as well as trading models and risks in the Chinese art market. He joined Takung Art Company to serve as CEO in January 2013. From March 2009 to January 2013, Mr. Xiao served as a general manager at Hangzhou LuxTimes Culture and Art Co., Ltd. in China. From December 2008 to March 2009, he worked as a director of FAI Electronics Co., Ltd. and focused on marketing development.	Leslie Chow is a qualified Certified Public Accountant in the US, having trained at Deloitte & Touche LLP in the US. He joined Albeck Financial Services in 2009, becoming an MD in 2011 and a partner in 2014. Since 2015, Leslie Chow has been an NED for two Hong Kong-listed companies, PPS International and Golden Power Group. He acted as a consultant to Takung Art from 2015 before being appointed CFO in February 2016.
General manager: Zishen Li	**VP of IT: Xu Zheng**
Mr. Li has worked in the Chinese art industry since 2009 and has extensive knowledge of storage, appraisal and other procedures related to the trading and management of artworks. He joined Takung in March 2015 as VP of Hong Kong Takung responsible for the listing process, and in July 2015 was appointed general manager of Shanghai Takung. From 2009 to 2014, Mr. Li served as the assistant general manager of an artwork electronic exchange in China. From 2006 to 2008, he was engaged in customer service related work at WuXi AppTec (NYSE:WX).	Mr. Zheng has over five years software project management experience, across various platforms, following eight years' experience working under a UNIX & LINUX environment. From 2008 to 2010, Mr. Zheng worked as a project manager of software engineering at Beijing Qiantang Hengsheng Science & Technology Co., Ltd., with a focus in maintaining and developing banking systems. For the previous two years he worked as a software engineer in Tianjin City Card Co., Ltd., involved in business development and implementation of clearing centre and system processes.

Principal shareholders	(%)
Sun Yan	33.4

Companies named in this report

Artnet (ART),Sotheby's (BID),Art Vivant (7523 JT), Seoul Auctions (063170 KS), Redbubble (RBL), CafePress (PRSS), Etsy (ETSY), Envestnet (ENV), Swissquote (SQN0, Morningstar (MORN), Dun & Bradstreet (DNB), IHS Markit (INFO), Interactive Brokers (IBKR), Autotrader (AUTO)