Friendtimes (6820 HK)

Absolute market leader in the ancient Chinese female-oriented game genre, fully capture the opportunities in the rising of "She Economy"

Hong Kong | Game Sector | Company Initiation

Investment Summary

A well-established mobile game developer, publisher and operator with particular success in female-oriented games

Friendtimes is a leading integrated and well-established mobile game developer, publisher and operator with particular success in female-oriented games. Since its inception in 2010, it has been strategically focusing on mobile games targeting female players in the PRC to capture the significant growth potential in both the mobile game industry and the femaleoriented game market. The company has developed multiple hit female-oriented games such as the Legend of Empress (熹妃傳), Royal Chaos (熹妃 Q 傳) and Rise of Queendom (宮廷計 手游), which are highly recognized by the female mobile gamers. The company develop, publish as well as operates games and such an integration of upstream and downstream services in the value chain of the mobile game industry has enhanced management efficiency, productivity and profitability of its operations.

Particular focus in ancient Chinese style female-oriented mobile game

According to Frost and Sullivan, the Company ranked the third among all competitors in China in terms of revenue from female-oriented games, with a market share of 2.9%. In ancient Chinese style female-oriented mobile game market, only few companies in the PRC have the capability of providing high-quality products and obtaining IP from IP holders. Thus, the market is relatively more concentrated. The company ranks first among all competitors in China in terms of revenue from ancient Chinese style female-oriented mobile game, with market share of 31.5%, way higher than the 2nd largest by nearly 30 pct.

The company has a leading position in female-oriented mobile game development

The company's R&D team is consisting of roughly 900 employees, primarily comprising a team of designers, artists, programmers, sound engineers, plot designer and testing engineers. To retain key game development employees, the company has adopted various incentive measures such as competitive remuneration and welfare package, performance-based incentive bonus and continued professional trainings. As a result, the turnover rate of its key game development employees were relatively low at 0.6%, 0.2%, 0.3% in 2016,2017 and 2018. Further, the company focuses on R&D and has continuously increase its R&D expenses in the previous years. The R&D expense has increased from RMB 136 million in 2018 to RMB 223 million in 2019, with a yoy increase of 64%. The respective R&D expense ratio was 13%, representing a yoy increase of 3.9 pct. This R&D expense ratio is a higher-than-average level in the industry. The continuous increase in R&D expense of the company has enables the company to survive in the gradually refined Chinese mobile game sector.

Valuation

The company focuses on female-oriented mobile game market (especially in the ancient China female-oriented sub-sector) and has achieved impressive results as well as building its recognition among female mobile game players. The company plans to expand its game portfolio to other female-oriented mobile game sub sectors, in order to satisfied the diverse needs of the female mobile gamers. The target price is RMB 3.20, which corresponds to 2020/2021 PE ratio of 11.8x/9.0x. We are initiating with a "Buy" rating. (Market closing price as of 23rd Oct) (exchange rate: RMB 0.88/HKD)



28 Oct 2020

Buy (Initiation)

CMP HKD 2.39 (Closing price as of 23 Oct) TARGET HKD 3.20 (+34%)

COMPANY DATA

O/S SHARES (MN) :	2,188
MARKET CAP (HKD MN) :	5,236
52 - WK HI/LO (HKD):	4.08/0.75

SHARE HOLDING PATTERN, %	
Eternal Heart Holdings Limited	

Eternal Heart Holdings Limited	42.79
Ling Long Holdings Limited	8.53
Warm Sunshine Holdings Limited	8.56
Purple Crystal Holdings Limited	6.60

PRICE VS. HIS



Source: Wind, Phillip Securities

KEY FINANCIALS

CNY mn	FY19	FY20E	FY21E	FY22E
Net Sales	1,689	2,265	2,920	3,159
Net Profit	416	520	686	766
EPS	0.21	0.24	0.31	0.35
P/E, x	9.8	8.8	6.7	6.0
BVPS	0.67	0.75	0.99	1.24
P/BV, x	3.1	2.8	2.1	1.7
ROE (%)	32%	32%	32%	28%
ROA (%)	27%	28%	27%	25%

Market closing price as of 23th Oct

Source: Company Data, Phillip Securities Est.

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Figure 2: Number of female mobile game players and %

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Industry Review and Forecast

Female-oriented mobile games market

Female-oriented mobile game refers to a specific category of games that are designed for women or suitable for female players. According to Frost and Sullivan, the number of Chinese female mobile game players accounted for 42% of the number of Chinese mobile game players. Nonetheless, female-oriented mobile game market in the PRC only accounted for 26.0% of the total mobile game market in the PRC in terms of revenue in the same year. 1) In the past 30 years, as the level of education of Chinese women has increased significantly, women's employment rate has also improved. Hence, their average income has increased by more than 60%, and women's disposable income has also increased accordingly. With the recent vigorous development of the "she economy", we believe that the increasing consumption power and willingness of Chinese women in gaming and entertainment will be a major trend in the future. 2) We believe that the quality of the female-oriented mobile games in China still have room to improve. With the industry's gradual trend of refinement, women's mobile games will gradually mature, and the ARPU of women's mobile games is expected to further increase.3) As female players have different interests and requirements for games, we believe that female-oriented mobile game genres will become more diversified to meet the requirements of different female players, such as love simulation games and dress-up games. This will further increase the number of female mobile game players. Based on the above reasons, we believe that growth potential for women-oriented mobile game market is promising.

Figure 1: Market size of Chinese female oriented game market



Source: Frost and Sullivan. PSHK

Source: Frost and Sullivan, PSHK

According to the "China Game Industry Report for the First Quarter of 2020" (《2020 年第一季度中國遊戲產業報告》) by the Game Working Committee of the China Music and Digital Association (中國音數協遊戲工委), the total gross billings of female-oriented game market in 1Q20 was RMB 19.24 billion, with a yoy increase of 49.5%, way higher than the growth of the overall mobile game market. Further, the number of female-oriented game players also increased by 17.05% yoy and reach 357 million. The above data shows that women-oriented game market, which was once defined as a niche mobile game market, is gradually releasing its growth potential in the game market. In the future, it will become one of the mainstream sector in the mobile game market.



Figure 3: qoq growth of female-oriented mobile game market Figure 4: qoq growth of Chinese female mobile game players



The number of Chinese female mobile game players (million) and qoq growth 17% 305 300 290 296 2% 2% 1% 201901 201902 201903 201904 202001 Chinese female mobile game players aoa growth

Source: Game Working Committee of the China Music and Digital Association, PSHK

The difference between male and female players

1) Unlike male players, female players pay more attention to game entertainment and emotional communication in games, so female players prefer simulation games, such as pet games, dress-up games, and romance games. 2) Compared with male players, female players pay more attention to the storyline, visual and sound effects of the game, while male players pay more attention to gameplay and enjoy the glory and pleasure brought by victory. 3) from a psychological point of view, male players are more restrained to spend while paying, and they measure cost performance in many ways. On the contrary, female users have a consumption preference of "pay for love" and have the characteristics of impulsive consumption. 4) the tastes and aesthetics of female players are more likely to be changed by other factors, such as market trends, etc. Therefore, for game developers, whether game content and gameplay can be adjusted in real time according to market trends will be the key to their user retention. 5) according to the "2019-2024 Women's Market Research and Investment Prospect Forecast Analysis Report on the Mobile Game Industry" (《2019-2024 年女性向手遊 行業市場深度調研及投資前景預測分析報告》) released by xinsijie Industry Research Center (新思界產業研究中心), Female tend to more time and money in games than male players. The weekly retention rate and game stickiness of female players to games are also much higher than that of males.

The market for PRC Mobile Games Overseas

In recent years, many mobile game companies have been focusing on their overseas market business, mainly because the mobile game markets in many overseas regions (especially Southeast Asia) are still in the early stage of development and has great growth potential. In contrast, the Chinese mobile game market is already in the mature stage and its growth has significantly slowed down. Secondly, the Chinese game market is indeed hugely affected by policies. Relevant national departments issued a number of game supervision measures (including tightening supervision on underage gamers and restricted their game time) in 2018-2019, and suspended the pre-approval for games in 2018. Although the current pre-approval procedure has resumed, nonetheless there are still significant policy risks in China's mobile game market. On the contrary, games in majority of overseas markets are only supervised through the "game classification system", where games are classified by the age of suitable players. It can be seen that the regulatory intensity of the overseas game market is obviously lower than that of the Chinese market. As a result, expanding overseas markets will help Chinese mobile game industry participants to reduce this policy risk. According to Frost & Sullivan, the China's overseas mobile game market recorded a significant



growth at a CAGR of 57.5% from 2014 to 2018, and is expected to grow at a CAGR of 20.0% from 2018 to 2023. The Chinese mobile games have already achieved good results in overseas market. According to the statistics of the Overseas Research Institute (海外研究院), in the US Google Play Store Top 100 free list and Top 100 best-selling list, apps from China have occupied 15 and 20 places respectively. Further, there are 30 Chinese mobile games in the Top 100 best-selling Korean mobile games in 2019. Further, according App Annie data, the market share of Chinese mobile games in overseas markets was up by 2.9ppt yoy in 1H20, and reached 21.2%, which is only slightly behind Japan with 21.5%.



The Chinese game advertisement market

In recent years, the growth of users in the Chinese game market has gradually been slow. According to Frost & Sullivan, the CAGR of Chinese gamers/mobile game players from 2019 to 2024 is expected to be 2.4%/2.7%. In 1H20, even under the impact of COVID and quarantine, the growth of users remained slow. According to the "China Game Industry Report for January-June 2020" 《2020 年度 1-6 月中國遊戲產業報 告》, the number of gamers in China in 1H20 was 557 million, a yoy increase of only 1.97%. As the growth of number of Chinese gamers begins to slow down, the difficulty of acquiring customers for game companies has increased. On the other hand, according to Reyun data, the total amount of creatives of the Chinese TOP 50 highest creatives mobile games have accounted for roughly 41%/40% of the total amount of creatives of the Chinese TOP 500 highest creatives mobile game in 20Q1/20Q2, up by 5ppt/4ppt comparing to the 36% in 19Q4. The increase in this proportion means that the Chinese game advertisement market is gradually dominated by the market leaders. According to DataEye-ADX, the Game 《亂世王者》by Tencent ranked 13th on the ranking of highest creatives Chinese game. This is relatively surprising, since the games developed by Tencent don't usually appear in the Chinese game advertisement markets, as they are usually promoted and advertised through the diversified advertisement channels of Tencent. This served as a clear evidence that the market leaders have begun to enter the Chinese game advertisement market. The combination of the increasing customer acquisition difficulties as well as the fact that the market leaders begin to enter the Chinese game advertisement market have driven the cost of game advertisement upward significantly.



40%

2020Q2



Figure 8: The total amount of creatives ratio between Top 50 and 500

The total amount of creatives of Top 50 highest

creatives mobile games as ratio of the amount of Top 500 highest creatives mobile games

41%

2020Q1





36%

2019Q4

Developing exquisite games by enhancing R&D capabilities is the general trend in the sector

Game development capabilities and game quality have become particularly important especially in the background of high game advertisement cost. The increase in game advertisement cost will squeeze the living space of non-exquisite games on the one hand, and on the other hand, it has shifted the attention of mobile game developers onto the quality of games in order to acquire customers and retain them, rather than spending significant amount on advertisement. In addition, as players consume more and more rationally, whether mobile game companies can tap the value of its existing users by providing high-quality games will become the key. Further, pre-approval of games by Chinese Government are more stringent than ever. This has further pushed game companies to refine their games in order to increase the games' life cycle to cope with the increasingly stringent pre-approvals. The above reasons have promoted high quality and refinement of the mobile game industry and we believe that that increasing their R&D capabilities will be the only way for mobile game companies to survive. Take 37 Interactive Entertainment (A-shares) and XD Inc (HK-listed) as example, the R&D expense of 37 interactive and XD in 1H20 were RMB 645/218 million, up by 99%/68%. The corresponding R&D expense ratio were also up by 2.7ppt/5.5ppt.



Company Overview and its Competitive Advantages

A well-established mobile game developer, publisher and operator with particular success in female-oriented games

Friendtimes is a leading integrated and well-established mobile game developer, publisher and operator with particular success in female-oriented games. Since its inception in 2010, it has been strategically focusing on mobile games targeting female players in the PRC to capture the significant growth potential in both the mobile game industry and the female-oriented game market in China. The company has developed multiple hit female-oriented games such as the Legend of Empress (熹妃傳), Royal Chaos (熹妃 Q 傳) and Rise of Queendom (宮廷計手游), which are highly recognized by the female mobile gamers. The company develop, publish as well as operates games and such an integration of upstream and downstream services in the value chain of the mobile game industry has enhanced management efficiency, productivity and profitability of its operations. By leveraging the success and popularity of its games in China, the company has expanded its publishing business overseas in 2011 and has set up overseas office in Hong Kong and Korea. The company was also awarded the "National Key Cultural Export Enterprise(國家文化出口重點企業)" in 2018 and 2019. The company's games have multiple versions in different languages, ie simplified Chinese, Traditional Chinese, English, Korean, Japanese, Vietnamese, Thai etc.

Figure 9: Milestone of FriendTimes



Source: Company, PSHK

Particular focus in ancient Chinese style female-oriented mobile game

According to Frost and Sullivan, the Company ranked the third among all competitors in China in terms of revenue from female-oriented games, with a market share of 2.9%. In ancient Chinese style female-oriented mobile game market, only few companies in the PRC have the capability of providing high-quality products and obtaining IP from IP holders. Thus, the market is relatively more concentrated. The company ranks first among all competitors in China in terms of revenue from ancient Chinese style female-



oriented mobile game, with market share of 31.5%, way higher than the 2nd largest by nearly 30 pct. Ancient Chinese RPG mobile games are games with story line, hence compared with games without storyline, they have the characteristics of higher user stickiness, and longer game life cycle. In addition, the strong storyliness also increases the ARPU of these games. However, due to the relatively high average game duration of users of this type of game, the users are all moderate to heavy game players, while female mobile game players are mainly light players. Hence, the target users of Ancient Chinese female oriented games are very small, compared with other femaleoriented games. According to Frost and Sullivan, the size of the ancient Chinese female oriented mobile game markets will reach RMB 8.62 billion in 2023, with CAGR from 2018-2023 being 18.1%, higher the average growth for mobile game sector in the same period. The company, being the obvious leader in this sub sector, will definitely benefit from this high growth.



Archosaur Games



The company's game portfolio

As of end of 2019, the company is operating 10 mobile games and 7 web games, with 33 versions of different languages. Further the portfolio consists games with different game genres, ie RPG, SLG, love Simulation etc.

Game	Sin Se of Endom RPG 計手游) Sin Chaos RPG	Language	Publish	Publish Date	Expected Lifecycle (months)
		Simplified Chinese (PRC)	Self-Publish	2018/3	
Rise of		Traditional Chinese	Third Party	2018/12	
Queendom	RPG	Korean	Self-Publish	2019/1	72
(宮廷計手游)	Vietnamese	Third Party	2019/5		
	Thai	Third Party	2019/8		
		Simplified Chinese (PRC)	Self-Publish	2017/9	
		English	Self-Publish	2018/1	
Royal Chaos _{RPG} (熹妃 Q 傳) ^{RPG}		Traditional Chinese	Third Party	2018/4	
	RPG	Korean	Self-Publish	2018/7	84
		Vietnamese	Third Party	2018/8	
		Thai	Third Party	2018/11	
		Japanese	Self-Publish	2019/3	

Figure 12: The company's self-developed mobile games



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Archosaur Games

Legend of Empress (熹 妃傳)	RPG	Simplified Chinese Traditional Chinese Korean Vietnamese Japanese	Self-Publish Third Party Self-Publish Third Party Self-Publish	2015/6 2015/12 2016/7 2016/12 2018/5	72	
		English	Self-Publish	2019/2		
Fate: Royal Revenge (京 門風月)	RPG	Simplified Chinese (PRC) Traditional Chinese Simplified Chinese (Overseas)	Self-Publish Third Party Self-Publish	2016/6 2016/11 2017/7	60	
Fantasy: Pocket Pets (幻寵大陸)	RPG	Simplified Chinese (PRC)	Self-Publish	2018/4	18	
Dynasty of Kingdoms (帝 王雄心)	SLG	Simplified Chinese (PRC)	Self-Publish	2019/6	18	
Fate of the Empress (浮 生為卿歌)	RPG	Simplified Chinese (Overseas) Traditional Chinese Simplified Chinese (PRC) Korean	Self-Publish Third Party Self-Publish Self-Publish	2019/5 2019/6 2019/12 2020/6	72	
Story: Cyborg Fantasy (化 芯物語)	Love Simulation	Simplified Chinese (Overseas)	Self-Publish	2019/6	24	
Yokai Kitchen (精靈食肆)	Management Simulation	English Traditional Chinese Korean Simplified Chinese (PRC)	Self-Publish Third Party Self-Publish Self-Publish	2019/6 2019/7 2019/7 2019/8	84	

Source: Company, PSHK

Legend of Empress (熹妃傳)

Legend of Empress (熹妃傳) is the company's first large scale ancient Chinese style female-oriented aesthetic mobile game. The game is launched in various countries and regions. The game was designed and built based on a popular classic story, Legend of Xi Princess of Qing Dynasty (清宮熹妃傳) composed by a well-known novel writer. The game is a 2D RPG where the players need to pass a series of levels to experience the life journey of Empress Xi from a maid in the imperial palace to the empress. The game was very popular among female players, with peak DAU/MAU at 412/2,106 thousands and monthly revenue proceeds of approximately RMB46.0 million.

Figure 13: The interface of Legend of Empress (熹妃傳)



Source: Company, PSHK

Royal Chaos (熹妃 Q 傳)

Royal Chaos (熹妃 Q 傳) is designed and built based on the same story line of Legend of Empress (熹妃傳), but with different playstyle. Royal Chaos (熹妃 Q 傳) is a 3D game and it has enhanced graphics which was achieved by using the Unity 3D technology. As a result, the characters appear more realistic, which provides players with greater gaming experience. The setting in Royal Chaos (熹妃 Q 傳) is more relaxed and its artistic style is more lively and humorous as compared to the more traditional style

adopted by Legend of Empress (熹妃傳). Further, compared to Legend of Empress (熹 妃傳), Royal Chaos (熹妃 Q 傳) provides players with greater in-game player interactions and communication. As such, Legend of Empress (熹妃傳) and Royal Chaos (熹妃 Q 傳) are two different games, hence their target players are different to each other's. Royal Chaos (熹妃 Q 傳) was very popular after its launch in September of 2017, with highest DAU/MAU at 556/3,251 thousands and monthly sales proceeds of approximatively RMB 73.7 million.

Figure 14: The interface of Royal Chaos (熹妃 Q 傳)



Source: Company, PSHK

Fate of the Empress (浮生為卿歌)

Fate of the Empress (浮生為卿歌) is an ancient Chinese style female-oriented game, which was developed from a novel composed by the company's in-house novel composing team. It is a story-based RPG game which has an extensive and complicated game play structure with an aim to deeply engage players. It has incorporated 3D features and physically based rendering technology for more exquisite and splendid effects, and has incorporated real-time weather rendering system (即時天氣系統) to make the world in the game more realistic. Comparing with the company's previous Ancient Chinese games, Fate of the Empress (浮生為卿歌) was incorporated with more diverse elements (ie more interactions between players and different other playstyles). As of present, it is the company's largest scale game in terms of research and development expenses incurred. The game was published in Malaysia and Hong Kong/Macau/Taiwan region in mid-2019 and was launched in China in late-2019. The game has achieved first place in iOS role-playing games and strategy games in China, quickly after it was launched in China. In China, Fate of the Empress (浮生為卿歌) was launched on the IOS App store, but regarding the Android distribution, the company has adopted a unique distribution strategy, where the game was only published through TapTap platform and withdrew from all other major application stores and third party distribution platforms. This distribution strategy can help the company to reduce cost of third party distribution and spend the saved up costs on more precise advertisements, to boost the game's performance. According to DataEye, Fate of the Empress (浮生為卿歌) ranked 17th on the advertisement ranking of "moderatehardcore" games in 1H20, with 10,284 creatives. With the huge investment in advertisement, the game has become the first female-oriented mobile hit game in 2020, with the achievements of 5th place on the IOS best-selling games rank and has repeatedly appeared on the App store Top 20 mobile game revenue rankings in China (according to Sensor Tower data, ranked 11th in July 2020). However, due to the company's huge investments in advertisements and marketing, even though the game has generated RMB 493 million in 1H20 (47% of the company's total revenue), it did not contribute any profit. It took 6 months to reach the breakeven point. With that being said, with the decreasing marketing spending in 2H20, we believe the game will start contributing a significant profit for the company. The game was launched in Korea region in June 2020. With a wide range of marketing activities, including the endorsement of Lee Joon Gi, one of Asia's most popular celebrities, and offline multichannel advertising, the game became one of the TOP 3 free players on Google Play in a short timeframe.





Figure 15: The interface of Fate of the Empress (浮生為卿歌)



Source: Company, PSHK

Figure 16: Highest revenue mobile game in China IOS in July



排名	产品名称	题材	玩法	投放素材数
01	蓝月至尊版	传奇	MMORPG	47524
02	达叔传奇	传奇	MMORPG	33017
03	复古传奇	传奇	MMORPG	25984
04	少年三国志2	三国	卡牌	22316
05	梦幻西游网页版	西游	放置	17272
06	散人传奇	传奇	MMORPG	17073
07	三国志·战略版	三国	策略	17070
08	剑与远征	魔幻	卡牌	16837
09	至尊蓝月	传奇	MMORPG	14903
10	冰雪传奇	传奇	MMORPG	14538
11	贪玩蓝月	传奇	MMORPG	14516
12	蓝月至尊	传奇	MMORPG	14423
13	放置三国	三国	策略	14183
14	天龙八部荣耀版	武侠	MMORPG	12400
15	率土之滨	三国	策略,卡牌	10788
16	神武4	仙侠	回合制	10513
17	浮生为卿歌	宫廷	宫斗	10284
18	神魔三国志	三国	策略	9606
19	梦幻西游	西游	回合制	9051
20	爆装传奇	传奇	MMORPG	8417

Source: DataEye, PSHK

Figure 18: Advertisement creatives rank of imperial palace theme mobile games in 1H20



PhillipCapital

Game		Reve	nue (million	RMB)	
	2017	2018	2019	2019H1	2020H1
Rise of Queendom (宮廷計手游)	-	275	443	218	187
Royal Chaos (熹妃 Q 傳)	91	692	771	363	220
Legend of Empress (熹妃傳)	473	443	384	186	134
Fate of the Empress (浮生為卿歌)	_	-	-	-	493

Source: Company, PSHK

The company's game reserves

The company has a total of 9 game projects in reserve. In the future, the company will continue to focus on female-oriented mobile games, and intends to bring its experience and success in Ancient China female-oriented game style to other female-oriented game genres, in order to meet the needs of wide range of female mobile game players. Within the 9 games in the reserve, there are a few non Ancient China games, such as Fate: The Loved Journey (此生無白) (a Chinese-style fairy social mobile game) and Go La La Go! (杜拉拉升職記) (an urban female growth encouragement mobile game). Both of these games are in the game testing stage, and is expected to be launched in 2021Q1. In terms of game genres, the company will continue to maintain its advantages in Ancient China RPG game genre, while expanding to other game genres, such as simulation genre (Island Dreamer (海島夢想家)), role cultivating genre (Code: CSC) and strategy genre (Code: BGS). Besides that, the company is expected to continue publish games as a third party publishers for the games developed by the game studios the company has invested in.

Fate: The Loved Journey (此生無白)

Fate: The Loved Journey (此生無白) is the company's first female-oriented Chinesestyle fairy social mobile game. This game is based on the story of Fate: The Loved Journey (此生無白), a novel written by the company's internal novel writing team. The game has just completed the 12-day second round of testing and the company is still working on polishing and refining the game quality of the game. It is expected that the game will be launched in 21Q1. Up to now, the TapTap score on the game is 8.1/10, with the number of reservations exceeds 4900.

Figure 20: The advertisement photos of Fate: The Loved Journey (此生無白)



Source: TapTap, PSHK

Go La La Go! (杜拉拉升職記)

Go La La Go! (杜拉拉升職記) is the company's first urban female growth encouragement mobile game, based on the story line of the novel Go La La Go! (杜拉 拉升職記). It tells the story of Du Lala's transition from being a graduate in workplace to the boss. The IP was used to shoot TV series and movies and has a large number of fans. The game has successfully received pre-approval from the Chinese Government in September. The production of the game is almost completed and it will conduct multiple testing in 20Q4 and 21Q1. The main difference between this game and most of the company's previous games is that Go La La Go! (杜拉拉升職記) is a modern game, with costumes, characters and backgrounds in the game designed based on modern forms. This makes the game easier to implant commercial advertisements (such as costume brand and city landmarks), which will bring additional revenue to the game. As for the gameplay. The company has added a lot of innovative elements to enhance the game's playability.

Figure 21: The advertisement photos of Go La La Go! (杜拉拉升職記)



Source: TapTap, PSHK

The company has a leading position in female-oriented mobile game development

The company's R&D team is consisting of roughly 900 employees, primarily comprising a team of designers, artists, programmers, sound engineers, plot designer and testing engineers. To retain key game development employees, the company has adopted various incentive measures such as competitive remuneration and welfare package, performance-based incentive bonus and continued professional trainings. As a result, the turnover rate of its key game development employees were relatively low at 0.6%, 0.2%, 0.3% in 2016, 2017 and 2018. Further, the company focuses on R&D and has continuously increase its R&D expenses in the previous years. The R&D expense has increased from RMB 136 million in 2018 to RMB 223 million in 2019, with a yoy increase of 64%. The respective R&D expense ratio was 13%, representing a yoy increase of 3.9 pct. This R&D expense ratio is a higher-than-average level in the industry. The continuous increase in R&D expense of the company has enables the company to survive in the gradually refined Chinese mobile game sector. The R&D team of the company can be divided into o four departments categorizing by their different functions, namely, the game development centre, the artistic design centre, the social platform development centre and the technology support centre. The game development centre is responsible for game design and planning, programme development and project management of our game development process. The artistic design centre is specialised in the artistic design for the characters, scene and special effects of our games. The social platform development centre is responsible for the development and maintenance of our social platform application, Game Friend (好玩



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友). Lastly, the technology support centre is responsible for grounding up the fundamental the game structure with game engines, designing common and specific development tools and providing other technical support to our game development. The four centres have a detailed division of labor and each perform their duties to create a stable and powerful R&D system. Further the company's R&D capabilities is gradually maturing, from the 2D system in Legend of Empress (熹妃傳), to the 2.5D system in Royal Chaos (熹妃 Q 傳) and further to the 3D technology in Fate of the Empress (浮生為卿歌). The current 3D technology engine of the company is market leading in the female-oriented mobile game industry.



Source: Wind, PSHK

Source: Wind, PSHK

On the other hand, the company has accumulated a large amount of player data through years of mobile game publishing and operation, such as log-in frequency, player game preferences and player retention rate. The company collects player data, analyzes it, and finally combines the analysis conclusions and data with its research and development system. By analyzing player data, the company can clearly grasp the needs of players, and use the analysis conclusions in game development and formulating game operation strategies, which can improve user experience, increase the level of monetization, and extend the game life cycle.

The company oversea business is developing rapidly, it will continue to focus on expanding its overseas business

The company's current game portfolio includes 10 mobile games and 7 web games, with a total of 33 language versions. In terms of oversea game publishing, the games are currently mainly launching in Hong Kong, Macau, Taiwan, Japan, South Korea, Southeast Asia and North America. As mentioned above, many of the company's games, such as Fate of the Empress (浮生為卿歌), performed well in overseas markets. The company's past overseas revenue has grown rapidly, from RMB 113 million in 2017 to RMB 569 million in 2019, with a CAGR of 124%. The company's overseas revenue as a percentage of total revenue also increased from 16% in 2017 to 34% in 2019. Looking ahead, the company will continue to develop new language versions of existing games with localized styles and languages, and will invest more resources in developing overseas language versions of new games. On the other hand, the company also plans to develop other emerging mobile game markets in order to achieve high growth in overseas business revenue. Further, in addition to the Korean version issued in June, it is expected the company will launch the Vietnamese and Thai versions of Fate of the Empress (浮生為卿歌) in 2H20, hence we believe the game will contribute a significant amount of overseas revenue to the company.



Figure 24: The company's oversea revenue and oversea revenue %



Source: Company, PSHK

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Financial Analysis and Forecast

Revenue

The company's revenue in the past few years has continued to rise, from RMB 700 million in 2017 to RMB 1.69 billion in 2019, with a CAGR of 55% during the period. The main reason was that new games performed well during the period, and the revenue contribution from old games remained stable during the period. Looking to the future, the company's old games (ie Legend of Empress (熹妃傳), Royal Chaos (熹妃 Q 傳), Rise of Queendom (宮廷計手游)) have entered the maturity/decline period of their life cycle, so we expect the gross billings and the revenue from these games will gradually decrease yoy. On the other hand, the company's female-oriented Ancient Chinese RPG mobile game, Fate of the Empress (浮生為卿歌) launched in 2019 had a brilliant revenue performance in the 1H20, mainly attributed to the game's excellent quality and the huge advertisement expense incurred in 1H20. The game's 1H20 revenue was 493 million yuan, contributing 47% of the company's total revenue during the period. Considering 1) The game is currently only in the growth/maturity phase of its life cycle 2) The game's high growth in overseas markets (the game has been launched in Malaysia/Hong Kong, Macau, Taiwan/South Korea and other overseas regions) 3) The game's excellent performance in 1H20 and it has already been widely recognized by users. We believe that the game's future gross billings and revenue contribution can be maintained at a high level. We estimate that its revenue contribution in 2020/2021/2022 to be RMB 11.0/12.1/10.3 billion, respectively. In addition, the company currently has a total of 9 game projects in reserve, including Fate: The Loved Journey (此生無白) and Go La La Go! (杜拉拉升職記) which will be launched in 21Q1. Based on the company's past performance of female-oriented mobile games, we expect that the new games will also perform well after the launch, and will contribute to the company's revenue significantly. In summary, we predict that the company's revenue for 2020/2021/2022 to be RMB 22.7/29.2/31.6 billion respectively.

Revenue (Million RMB)	2017	2018	2019	2020E	2021E	2022E
Legend of Empress (熹妃傳)	473	443	384	269	242	218
- yoy(%)	-	-6%	-13%	-30%	-10%	-10%
Royal Chaos (熹妃 Q 傳)	91	692	771	486	389	311
- yoy(%)	-	659%	11%	-37%	-20%	-20%
Rise of Queendom (宮廷計手游)	-	275	444	311	280	252
- yoy(%)	-	-	61%	-30%	-10%	-10%
Fate: Royal Revenge (京門風月)	115	46	-	-	-	-
- yoy(%)	-	-60%	-	-	-	-
Fate of the Empress (浮生為卿歌)	-	-	-	1,100	1,210	1,029
- yoy(%)	-	-	-	-	10%	-15%
Others	22	8	90	100	800	1,350
- yoy(%) Source: Company, PSHK	-	-64%	1057%	11%	700%	69%

Figure 25: Revenue Breakdown

Source: Company, PSHK

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Figure 26: The Company's Revenue and Growth

Source: Company, PSHK

The company's GPM had an increasing trend in the previous few years, rising from 61.7% in 2017 to 65.3% in 2019. The increase in GPM was mainly attributed by the gradual decrease in the ratio of distribution cost to games' total gross billings, paid to the game distribution channels. Considering that the company will self-distribute in the android channel of China region in the future (seen in the Fate of the Empress (浮生為卿歌) game publishing), we believe the company can maintain the decrease in the ratio of distribution cost to games' total gross billings in the future. Hence, we predict the GPM in 2020-2022 will maintain the upward trend, and they are expected to be 65.4%/65.7%/65.8% respectively in 2020/2021/2022.

The company's S&M expense ratio were relatively stable in the past, kept between 23%-27%. The ratio has dropped from the 28.8% in 2018 to 23.3% in 2019. This was mainly because the new game Fate of the Empress (浮生為卿歌) was published in China region at year end, hence the company didn't invest much on the game's advertisement in year 2019. After considered 1) the increase in game advertisement expenses as a whole in the market (as discussed in the above industry review) 2) the addition advertisement expense as a result of the company's self-distribution game publishing strategy for Android channel in China region (seen in the huge S&M expense in 1H20 for Fate of the Empress (浮生為卿歌)). We believe that the S&M expense ratio will increase in the future and maintain at roughly 30% in 2020/2021/2022. On the other hand, we expect R&D expense ratio and admin expense ratio will maintain roughly at 10% and 2% respectively, for the years ahead.

Figure 27:	Figure 27: The Company's GPM and expense ratios										
	The company's GPM and expense ratios										
61.79	%	62.7%	65.2%	65.4%	65.7%	65.8%					
-											
27.29	%	28.8%	23.3%	30.4%	30.2%	29.6%					
12.89		9.3%	13.2%	10.1%	10.0%	10.1%					
7.89	6	2.4%	2.2%	2.0%	1.9%	1.8%					
2017	7	2018 GPM	2019	2020E 	2021E ense ratio	2022E					
	•	S&M exp	pense ratio	Admin ex	kpense ratio						

Source: Company, PSHK

INITIATION REPORT

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Valuation

The company focuses on female-oriented mobile game market (especially in the ancient China female-oriented sub-sector) and has achieved impressive results as well as building its recognition among female mobile game players. The company plans to expand its game portfolio to other female-oriented mobile game sub sectors, in order to satisfied the diverse needs of the female mobile gamers. We predict the company's EPS in 2020/2021/2022 to be RMB 0.238/0.313/0.350.

As of 23^{rd} of Oct, the average PE of the HK-listed mobile game companies with similar market capitalization is 8.4x. After considered how the company has differentiated itself among other peers with similar size by having a strong R&D capabilities and by being the market leader in a specific sub-sector, we are giving a 2021 target PE of 9x to the company. The target price is RMB 3.20, which corresponds to 2020/2021 PE ratio of 11.8x/9.0x. We are initiating with a "Buy" rating. (Market closing price as of 21th Oct) (exchange rate: RMB 0.88/HKD)

Figure 28: Comparable valuation

C	Charle and a	Olasian Drias	Market Car	PE			PB				
Company	Stock code	Closing Price	Market Cap	ттм	2019A	2020E	2021E	ттм	2019A	2020E	2021E
		(listed currency)	(RMB mn)								
HK stocks											
FRIENDTIMES	6820 hk equity	2.39	4,491	9.8x	-	8.3x	6.4x	3.4x	-	2.1x	1.6x
TENCENT	700 hk equity	561.50	4,632,400	44.1x	49.0x	38.2x	30.6x	8.6x	10.9x	8.3x	6.6x
NETEASE INC	9999 HK equity	135.70	403,576	-	-	22.8x	19.6x	-	-	5.7x	4.9x
ARCHOSAUR GAMES	9990 hk equity	19.60	13,758	-	-	21.5x	12.4x	-	-	3.7x	2.7x
NETDRAGON	777 hk equity	17.28	8,388	11.1x	9.3x	9.6x	7.6x	1.3x	1.4x	1.3x	1.1x
ZENGAME	2660 hk equity	1.18	1,034	6.1x	-	3.6x	3.4x	1.7x	-	1.2x	0.9x
XD INC	2400 hk equity	34.35	13,427	30.2x	27.1x	27.1x	20.1x	-	6.4x	5.0x	4.0x
IDREAMSKY	1119 hk equity	4.00	4,372	13.6x	7.7x	8.6x	7.5x	1.1x	-	1.0x	0.9x
CMGE	302 hk equity	3.27	6,559	21.4x	10.1x	8.3x	6.6x	1.8x	1.9x	1.5x	1.3x
IGG INC	799 HK equity	8.54	9,052	6.0x	9.1x	6.9x	7.9x	2.9x	3.8x	2.7x	2.1x
			Average	17.8x	18.7x	15.5x	12.2x	3.0x	4.9x	3.2x	2.6x
ARCHOSAUR GAMES	9990 hk equity		Median	12.3x	9.7x	9.1x	7.7x	1.8x	3.8x	2.4x	1.9x
A stocks											
WUHU SANQI	002555 CH equity	30.13	63,642	22.7x	30.0x	21.5x	18.2x	7.8x	8.3x	6.5x	5.0x
GIANT NETWORK	002558 CH equity	18.14	36,722	42.0x	33.0x	33.3x	27.7x	4.4x	-	3.2x	2.8x
ZHEJIANG CENTURY	002602 CH equity	8.66	64,539	21.1x	21.5x	16.5x	13.3x	2.2x	3.1x	2.6x	2.3x
PERFECT WORLD	002624 CH equity	27.75	53,825	31.7x	36.1x	22.5x	18.8x	5.0x	5.4x	4.3x	3.5x
G-BITS NETWORK	603444 CH equity	457.17	32,854	35.1x	36.3x	28.3x	22.7x	9.3x	9.8x	8.3x	6.5x
			Average	30.5x	31.4x	24.4x	20.1x	5.7x	6.7x	5.0x	4.0x
			Median	31.7x	31.5x	22.0x	18.5x	4.7x	5.4x	3.7x	3.2x
US stocks											
EA	EA US equity	126.92	244,516	18.5x	32.4x	27.2x	22.9x	4.7x	7.2x	5.4x	4.5x
NINTENDO	NTDOY US equity	66.99	470,726	-	-	3.6x	17.4x	-	-	0.5x	-
SONY CORP	SNE US equity	74.60	627,565	-	11.8x	16.8x	18.3x	-	2.6x	-	1.9x
ACTIVISION BLIZZARD	ATVI equity	81.94	415,891	35.6x	36.5x	24.8x	24.0x	4.6x	4.9x	4.2x	3.7x
			Average	27.1x	26.9x	18.1x	20.7x	4.6x	4.9x	3.4x	3.3x
			Median	27.1x	32.4x	20.8x	20.6x	4.6x	4.9x	4.2x	3.7x

As of 23^{rd} Oct Closing Price, US Stocks closing price as of 20^{th} Oct

Source: Bloomberg

Risk

1) The tightening on Game regulations 2) The Games underperform comparing to expectation 3) Games launching are delayed due to unexpected reasons 4) Failure in game genre expansion



Financial Statements

Key Financial Data

2018	2019	2020E	2021E	2022E
11.7	9.8	8.8	6.7	6.0
6.9	3.1	2.8	2.1	1.7
2.6%	4.2%	3.4%	4.5%	5.0%
0.18	0.21	0.24	0.31	0.35
0.31	0.67	0.75	0.99	1.24
0.06	0.10	0.08	0.11	0.12
109%	15%	34%	29%	8%
151%	22%	23%	32%	11%
185%	23%	25%	32%	12%
63%	65%	65%	66%	66%
24%	26%	24%	24%	25%
23%	25%	23%	23%	24%
59%	32%	32%	32%	28%
46%	27%	28%	27%	25%
	11.7 6.9 2.6% 0.18 0.31 0.06 109% 151% 185% 63% 24% 23%	11.7 9.8 6.9 3.1 2.6% 4.2% 0.18 0.21 0.31 0.67 0.06 0.10 109% 15% 151% 22% 185% 23% 63% 65% 24% 26% 23% 25% 59% 32%	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Market closing price as of 23rd Oct

Consolidated Statement of Profit or Loss

(RMB million)	2018	2019	2020E	2021E	2022E
Revenue					
Self-developed games	1464	1689	2265	2920	3159
Third-party developed games	0	0	0	0	0
Others	0	0	0	0	0
Total Revenue	1464	1689	2265	2920	3159
Cost of Sale	-546	-587	-784	-1002	-1080
Gross Profit	918	1102	1481	1919	2078
Sales and marketing expense	-422	-393	-689	-882	-935
R&D expense	-136	-224	-229	-292	-319
General and admin expense	-32	-62	-45	-56	-57
Other income/(loss)	31	15	20	20	20
Operating Profit	358	439	539	709	787
Finance income	5	8	15	21	29
Finance cost	-1	0	0	0	0
Share of loss of an associate	-1	0	0	0	0
Changes in fair value of financial assets					
measured at fair value through profit or loss	0	-8	0	0	0
Profit Before Tax	361	438	553	729	815
Income Tax	-25	-23	-33	-44	-49
Non controlling interest	0	0	0	0	0
Shareholders' Profit for the year	337	416	520	686	766
EPS	0.180	0.214	0.238	0.313	0.350
DPS (HKD)	0.06	0.1	0.081	0.107	0.119



Consolidated statement of Financial Position

(RMB million)	2018	2019	2020E	2021E	2022E
Non-Current Assets					
Property, plant and equipment	78	202	203	205	207
Intangible assets	1	8	13	22	37
Right-of-use assets	13	9	10	12	13
Others	20	28	28	28	28
Total Non-Current Asset	113	246	254	267	285
Current Assets					
Trade and other receivables	132	219	267	383	364
Cash and cash equivalents	473	893	1187	1695	2284
Others	18	153	153	153	153
Total Current Asset	623	1265	1607	2230	2800
Total Asset	736	1511	1861	2497	3086
Non-Current Liabilities					
Contract liabilities	11	9	12	16	17
Lease liabilities	2	0	1	3	4
Total Non-Current Liabilities	14	9	13	18	21
Current Liabilities					
Trade and other payables	82	135	111	187	203
Others	66	61	106	131	141
Total Current Liabilities	149	196	217	319	344
Fault					
Equity Share capital	52	0	0	0	0
Reserves	522	1307	1631	2160	2721
Non-controlling interests	522	1307	1631	2160	2721
Total Equity	573	1307	1631	2160	2721
	515	1007	1051	2100	2121
Total Equity and Liabilities	736	1511	1861	2497	3086

Cash Flow Statement

2018	2019	2020E	2021E	2022E
361	438	553	729	815
5	9	9	12	15
23	-93	-71	-41	35
-46	-12	0	-35	-67
344	342	492	665	798
-61	-95	-16	-22	-32
6	-141	0	0	0
-55	-236	-16	-22	-32
0	434	0	0	0
-124	-115	-182	-135	-177
-124	319	-182	-135	-177
165	425	294	507	589
305	473	893	1187	1695
2	-4	0	0	0
473	<mark>8</mark> 93	1187	1695	2284
	361 5 23 -46 344 -61 6 -55 0 -124 -124 -124 165 305 2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

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Total Return	Recommendation	Rating	Remarks
>+20%	Buy	1	>20% upside from the current price
+5% to +20%	Accumulate	2	+5% to +20% upside from the current price
-5% to +5%	Neutral	3	Trade within ± 5% from the current price
-5% to -20%	Reduce	4	-5% to -20% downside from the current price
<-20%	Sell	5	>20% downside from the current price

We do not base our recommendations entirely on the above quantitative return bands. We consider qualitative factors like (but not limited to) a stock's risk reward profile, market sentiment, recent rate of share price appreciation, presence or absence of stock price catalysts, and speculative undertones surrounding the stock, before making our final recommendation

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