



ChangYou.com

Buy Presentation

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WESTERN INVESTMENT CLUB

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# Business Overview



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# Business Overview

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## Online Gaming

Leader in Chinese MMO gaming vertical



- ChangYou is the leading developer and operator of online games in China
- It is a subsidiary of Sohu.com
- Owns 7Road.com and 17173.com
- Provides MMORPG, web-based, and mobile games
- Revenue generation originates from in-game stores that allow customization and advertisement fees

# Business Overview

## Online Gaming

### Categories of Games

ChangYou

MMORPG

Tian Long Ba Bu (TLBB)



- “Massive Multiplayer Online Role-Playing Games”
- Notable games such as TLBB, WoW, and MapleStory

Web Based

DDTank



- Single or small multi-player games
- Consist of games that resemble Runescape and Perfect World

Mobile

Wartune IOS



- Recent entrance into mobile space
- Consist of successful MMORPGs or Web Games

# Investment Thesis



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# Investment Thesis

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## Thesis and Overview

Changyou.com	
Price:	\$30.71
Market Cap:	\$1.46B
LTM EV/EBITDA:	3.2x
LTM P/E:	5.3x
LTM FCF:	\$144M
EPS:	\$5.34

- Excellent selection of games
- Sustainable competitive advantage
  - Strong relationship with Sohu
- Undervalued due to earnings miss
- Cheap based on EV/EBITDA and P/E multiples
- Special dividend of \$3.80



# Internal Analysis



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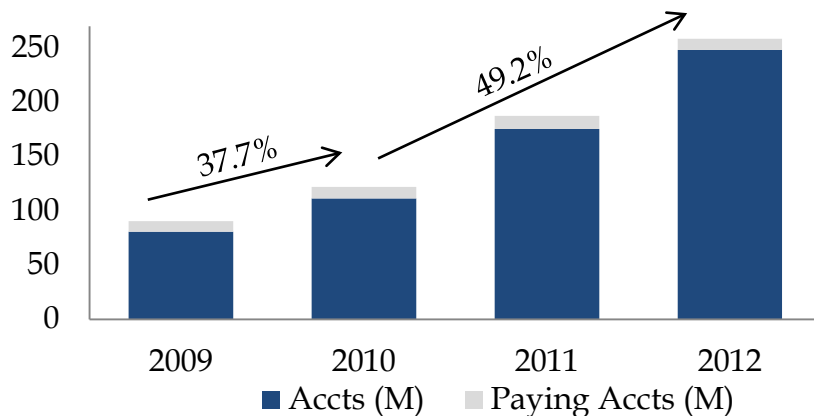
# Internal Analysis

## Overall Performance

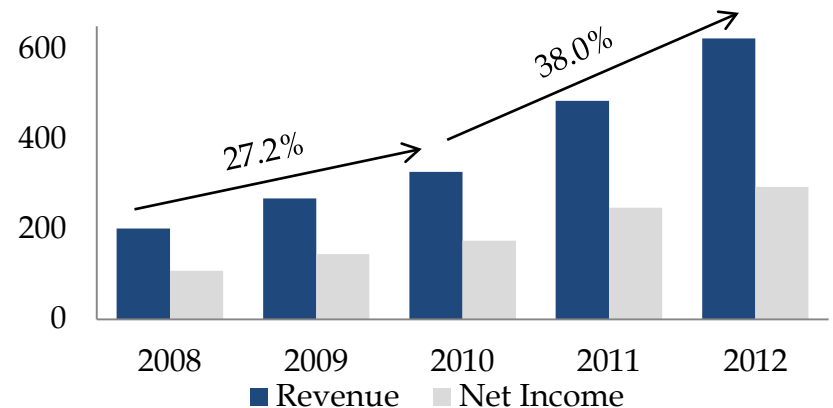
Consistently strong performance and growth in both major sectors

- 37 – 39 million monthly active users for its games
- 99 million monthly active accounts on 17173.com
- Very popular award winning games in China
  - DD Tank most searched for game on Baidu
- \$525.6 M in cash (\$10 per share): more than 30% of the market cap

### User Growth



### Revenue and Income Growth



# Internal Analysis

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## Specific Products and Competitive Advantage

- Tian Long Ba Bu: 3D martial arts MMORPG adopted from a Chinese novel
  - Ten classes, several occupations, and 100+ skills
  - 24 expansion packs, major expansion released October 28
- DD Tank: 2D Combat and RPG web game
  - Competitive and addictive, featuring thousands of costumes and accessories
  - “Baidu Outstanding Web Game”; released in 19 languages
- Wartune: 2.5D RTS web game launched in 9 different languages
  - Players build kingdoms fighting against a demonic race
  - “Baidu Outstanding Web Game”; “Most Anticipated Game” prior to launch
- 17173.com: Go-to hub for gamers in China
  - Generates advertising revenues and drives traffic to games
  - Essential for gaining feedback and understanding gamers

The 3 games, 9+ other games and 17173.com complement each other to form a major competitive advantage

# Internal Analysis

## User Growth and Retention Strategy

### Dedicated product development team

- ChangYou effectively uses feedback to improve games and drive revenue
  - Surveys, forums, customer service, feedback, and 17173.com
- Game updates released 1 – 2 times a week
  - Minor gameplay updates that include new virtual items
- Significant expansions released every few months
  - Increase player interest and enhance experience increasing overall loyalty
- Updates and expansions increase game lifespan and renew interest
- New items and content are essential to maintaining and increasing sales
- Proven management team; have worked together cohesively for 7 years



# Internal Analysis

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## Q3 and Future Direction

Poor performance in Q3 has depressed stock price

- Monthly active users down significantly for the quarter
  - One time event due to lack of updates over the quarter, especially for TLBB
    - Mitigated by the massive update just released
  - Accounted for in our valuation
- Weak forward guidance, significantly stunted EBIT margins
  - Increased spending on talented developers and marketing for the 9 new games
  - Margins expected to rise in the long term, significant value even if they don't
- New MMO Dou Po Cang Qiong already has a material impact on revenue
  - Open beta testing began April 10<sup>th</sup>
- Advertising revenue is growing significantly, 27.7% CAGR
  - Growth rate has been even higher recently for revenue as well as users
- Excellent brand reputation which drives users to new games

# External Analysis



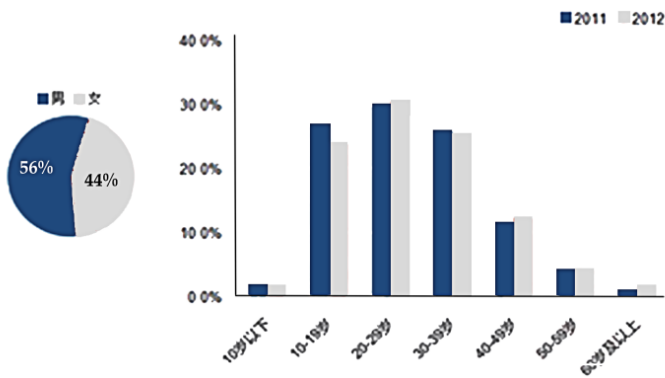
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# External Analysis

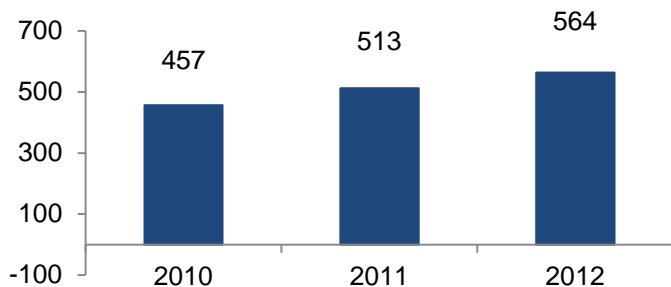
## Economic Factors

China remains one of the fastest growing internet gaming countries

### Internet Usage



### Number of internet users (in millions)



- China has the largest internet user base in the world
  - Grown to nearly 600 million internet users in 2013
  - Number of wireless users rose to 464 million
  - Majority of the internet users are between the ages of 20 - 29
- In contrast to the world, China's PC demand is still expected to grow at 3 - 4% this year
- Although China is slowing down its economic growth compared to the past, it is still growing at a comfortable 7% - 7.8% every year

# Valuation



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# Valuation

## Comparable Analysis

Depressed multiples due to most recent quarter

Company	Mrkt Cap.	Enterprise Value	Div. Yield TTM	EV/Sales		EV/EBITDA		P/E		Monthly Users (In Millions)	ARPU
	(In Millions)	(In Millions)	TTM	LTM	FY 2014E	LTM	FY 2014E	LTM	FY 2014E		
<b>Pure Play Comparables</b>											
Shanda Games	\$1,159	\$724	-	1.10X	1.00X	2.70X	2.40X	6.80X	5.30X	20.4	15.7
Perfect World	\$872	\$482	2.5%	1.20X	0.80X	5.10X	3.90X	14.10X	9.30X	24.1	130.7
NetDragon Websoft	\$731	\$533	2.8%	3.00X	3.90X	9.80X	9.50X	31.70X	16.60X	15.6	
Giant Interactive	\$2,660	\$2,071	5.9%	5.90X	4.80X	8.60X	7.40X	15.20X	11.20X	47.4	37.4
Mean	\$1,355	\$953	2.8%	2.80X	2.63X	6.55X	5.80X	16.95X	10.60X	26.9	61.3
<b>Broader Comparables</b>											
Netease Inc	\$58,741	\$40,885	-	4.60X	3.80X	-	7.60X	14.20X	12.30X		
Tencent	\$111,630	\$104,428	-	12.60X	8.20X	31.90X	23.30X	46.20X	32.10X		
Kingsoft Corp.	\$18,714	\$16,200	-	8.40X	5.90X	-	17.20X	29.00X	24.10X		
Mean	\$63,028	\$53,838	-	8.53X	5.97X	-	16.03X	29.80X	22.83X	-	-
ChangYou	\$1,628	\$1,311	12.37%	1.90X	1.50X	4.00X	3.90X	5.40X	6.10X	38.0	47.0

# Valuation

## Base Case Revenue Projections for DCF

In Millions Year	Actual					Estimate			
	2009A	2010A	2011A	2012A	2013E	2014E	2015E	2016E	2017E
Number of users from old games	80.9	111.4	175.5	248.1	297.7	345.3	386.8	417.7	434.4
<i>YoY growth</i>		37.7%	57.5%	41.4%	20.0%	16.0%	12.0%	8.0%	4.0%
Number of paying users from old MMOGs	9.6	10.8	12.0	10.5	9.5	9.8	9.8	9.3	8.7
<i>YoY growth</i>		12.5%	11.0%	(12.4%)	(10.0%)	4.0%	-	(5.0%)	(7.0%)
% of users	11.9%	9.7%	6.8%	4.2%	3.2%	2.8%	2.5%	2.2%	2.0%
Average Revenue/User (In RMB)	¥169.56	¥184.70	¥215.00	¥293.50	¥352.49	¥380.69	¥411.15	¥431.71	¥453.29
<i>YoY growth</i>		8.9%	16.4%	36.5%	20.1%	8.0%	8.0%	5.0%	5.0%
Number of paying users from old Web Games			3.4	6.6	6.9	7.2	7.2	7.2	6.9
<i>YoY growth</i>					4.0%	4.0%	-	-	(3.0%)
% of users				2.7%	2.0%	1.9%	1.7%	1.7%	1.5%
Average Revenue/User (In RMB)			¥38.00	¥83.00	¥116.37	¥134.98	¥156.58	¥172.24	¥189.46
<i>YoY growth</i>				118.4%	40.2%	16.0%	16.0%	10.0%	10.0%
Revenue from old games (In RMB)	¥1,627.78	¥1,994.76	¥2,704.10	¥3,631.21	¥4,132.22	¥4,707.97	¥5,161.92	¥5,263.94	¥5,251.85
<i>YoY growth</i>		22.5%	35.6%	34.3%	13.8%	13.9%	9.6%	2.0%	(0.2%)
<b>Revenue from old games (In US Dollars)</b>	<b>\$260.4</b>	<b>\$319.2</b>	<b>\$432.7</b>	<b>\$581.0</b>	<b>\$661.2</b>	<b>\$753.3</b>	<b>\$825.9</b>	<b>\$842.2</b>	<b>\$840.3</b>
<i>YoY growth</i>		22.5%	35.6%	34.3%	13.8%	13.9%	9.6%	2.0%	(0.2%)

# Valuation

## Base Case Revenue Projections for DCF

Number of users from new games					30.0	39.0	50.7	65.9	85.7
<i>YoY growth</i>						30.0%	30.0%	30.0%	30.0%
Number of paying users from new games					0.44	0.54	0.6	0.8	0.9
<i>YoY growth</i>						23.5%	16.9%	21.3%	15.8%
% of users					1.5%	1.4%	1.2%	1.2%	1.0%
Average Revenue/User (In RMB)					\$116.4	\$135.0	\$156.6	\$172.2	\$189.5
<i>YoY growth</i>					20.1%	8.0%	8.0%	5.0%	5.0%
Revenue from new games (In RMB)					\$50.7	\$72.7	\$98.6	\$131.5	\$167.6
<i>YoY growth</i>						43.3%	35.6%	33.4%	27.4%
<b>Revenue from new games (In US Dollars)</b>					<b>\$8.1</b>	<b>\$11.6</b>	<b>\$15.8</b>	<b>\$21.0</b>	<b>\$26.8</b>
<i>YoY growth</i>						43.3%	35.6%	33.4%	27.4%
<b>Advertisement Revenue</b>	<b>\$20.6</b>	<b>\$27.0</b>	<b>\$38.2</b>	<b>\$42.5</b>	<b>\$54.9</b>	<b>\$61.4</b>	<b>\$68.8</b>	<b>\$77.1</b>	<b>\$86.3</b>
<i>YoY growth</i>		30.7%	41.8%	11.3%	29.0%	12.0%	12.0%	12.0%	12.0%
<b>Total Revenue</b>	<b>\$281.1</b>	<b>\$346.1</b>	<b>\$470.9</b>	<b>\$623.5</b>	<b>\$724.1</b>	<b>\$826.3</b>	<b>\$910.5</b>	<b>\$940.3</b>	<b>\$953.4</b>
<i>YoY growth</i>		23.1%	36.0%	32.4%	16.1%	14.1%	10.2%	3.3%	1.4%

# Valuation

## Base Case Discounted Cash Flow Analysis

WACC		Exit Multiple Method		Synthesized Cost of Debt	
Debt to Cap.	29.3%	Exit Multiple (EBITDA)	3.90x	Current interest coverage	48.1
Equity to Cap.	70.7%	Value of Terminal Cash Flows	\$2,012.5	Implied rating	AAA
<b>Cost of Debt</b>	<b>4.2%</b>	<b>PV Terminal Cash Flows</b>	<b>\$1,214.7</b>	<b>Handicapped rating</b>	<b>A+</b>
Beta	1.81	Sum of PV FCF	\$778.3	<b>Implied spread</b>	<b>1.5%</b>
Equity Premium	6.85%	Implied Enterprise Value	\$1,993.0	Risk Free Rate	2.7%
Risk-Free Rate	2.65%	Less: Debt	\$323.0	<b>Cost of Debt</b>	<b>4.2%</b>
<b>Cost of Equity</b>	<b>15.1%</b>	Add: Cash	\$640.0		
<b>WACC</b>	<b>11.9%</b>	<b>Implied Equity Value</b>	<b>\$2,310.0</b>		
		Shares Outstanding	52.51		
		<b>Implied Share Price</b>	<b>\$43.99</b>		
		Current Share Price	\$30.71		
		<b>Implied Upside</b>	<b>43.2%</b>		

# Valuation

## Bear Case Revenue Projections for DCF

In Millions Year	2009A	Actual			Estimate				
	2009A	2010A	2011A	2012A	2013E	2014E	2015E	2016E	2017E
Number of users from old games	80.9	111.4	175.5	248.1	297.7	345.3	386.8	417.7	434.4
<i>YoY growth</i>		37.7%	57.5%	41.4%	20.0%	16.0%	12.0%	8.0%	4.0%
Number of paying users from old MMOGs	9.6	10.8	12.0	10.5	9.5	9.5	9.2	8.6	7.9
<i>YoY growth</i>		12.5%	11.0%	(12.4%)	(10.0%)	-	(3.0%)	(6.0%)	(8.0%)
% of users	11.9%	9.7%	6.8%	4.2%	3.2%	2.7%	2.4%	2.1%	1.8%
Average Revenue/User (In RMB)	¥169.56	¥184.70	¥215.00	¥293.50	¥323.14	¥339.30	¥356.27	¥363.39	¥370.66
<i>YoY growth</i>		8.9%	16.4%	36.5%	10.1%	5.0%	5.0%	2.0%	2.0%
Number of paying users from old Web Games			3.4	6.6	6.8	6.8	6.8	6.6	6.4
<i>YoY growth</i>					2.0%	-	-	(2.0%)	(4.0%)
% of users				2.7%	2.1%	2.0%	1.9%	1.8%	1.7%
Average Revenue/User (In RMB)			¥38.00	¥83.00	¥99.77	¥109.74	¥120.72	¥125.55	¥130.57
<i>YoY growth</i>				118.4%	20.2%	10.0%	10.0%	4.0%	4.0%
Revenue from old games (In RMB)	¥1,627.78	¥1,994.76	¥2,704.10	¥3,631.21	¥3,727.37	¥3,947.42	¥4,080.84	¥3,961.94	¥3,767.73
<i>YoY growth</i>		22.5%	35.6%	34.3%	2.6%	5.9%	3.4%	(2.9%)	(4.9%)
<b>Revenue from old games (In US Dollars)</b>	<b>\$260.4</b>	<b>\$319.2</b>	<b>\$432.7</b>	<b>\$581.0</b>	<b>\$596.4</b>	<b>\$631.6</b>	<b>\$652.9</b>	<b>\$633.9</b>	<b>\$602.8</b>
<i>YoY growth</i>		22.5%	35.6%	34.3%	2.6%	5.9%	3.4%	(2.9%)	(4.9%)

# Valuation

## Bear Case Revenue Projections for DCF

Number of users from new games					15.0	17.3	19.8	22.8	26.2
<i>YoY growth</i>						15.0%	15.0%	15.0%	15.0%
Number of paying users from new games					0.24	0.26	0.3	0.3	0.3
<i>YoY growth</i>						7.8%	7.7%	8.9%	5.7%
% of users					1.6%	1.5%	1.4%	1.3%	1.2%
Average Revenue/User (In RMB)					\$99.8	\$109.7	\$120.7	\$125.5	\$130.6
<i>YoY growth</i>					10.1%	5.0%	5.0%	2.0%	2.0%
Revenue from new games (In RMB)					\$23.8	\$28.2	\$33.4	\$37.8	\$41.6
<i>YoY growth</i>						18.6%	18.5%	13.2%	9.9%
<b>Revenue from new games (In US Dollars)</b>					<b>\$3.8</b>	<b>\$4.5</b>	<b>\$5.3</b>	<b>\$6.1</b>	<b>\$6.7</b>
<i>YoY growth</i>						18.6%	18.5%	13.2%	9.9%
<b>Advertisement Revenue</b>	<b>\$20.6</b>	<b>\$27.0</b>	<b>\$38.2</b>	<b>\$42.5</b>	<b>\$54.9</b>	<b>\$59.2</b>	<b>\$64.0</b>	<b>\$69.1</b>	<b>\$74.6</b>
<i>YoY growth</i>		30.7%	41.8%	11.3%	29.0%	8.0%	8.0%	8.0%	8.0%
<b>Total Revenue</b>	<b>\$281.1</b>	<b>\$346.1</b>	<b>\$470.9</b>	<b>\$623.5</b>	<b>\$655.0</b>	<b>\$695.3</b>	<b>\$722.3</b>	<b>\$709.1</b>	<b>\$684.1</b>
<i>YoY growth</i>		23.1%	36.0%	32.4%	5.1%	6.2%	3.9%	(1.8%)	(3.5%)

# Valuation

## Bull Case Revenue Projections for DCF

In Millions	Actual					Estimate			
Year	2009A	2010A	2011A	2012A	2013E	2014E	2015E	2016E	2017E
Number of users from old games	80.9	111.4	175.5	248.1	297.7	345.3	386.8	417.7	434.4
<i>YoY growth</i>		37.7%	57.5%	41.4%	20.0%	16.0%	12.0%	8.0%	4.0%
Number of paying users from old MMOGs	9.6	10.8	12.0	10.5	9.5	10.0	10.2	10.2	9.8
<i>YoY growth</i>		12.5%	11.0%	(12.4%)	(10.0%)	6.0%	2.0%	-	(4.0%)
% of users	11.9%	9.7%	6.8%	4.2%	3.2%	2.9%	2.6%	2.4%	2.3%
Average Revenue/User (In RMB)	¥169.56	¥184.70	¥215.00	¥293.50	¥352.49	¥394.79	¥442.17	¥477.54	¥515.74
<i>YoY growth</i>		8.9%	16.4%	36.5%	20.1%	12.0%	12.0%	8.0%	8.0%
Number of paying users from old Web Games			3.4	6.6	6.9	7.2	7.4	7.5	7.5
<i>YoY growth</i>					4.0%	4.0%	3.0%	2.0%	-
% of users				2.7%	2.0%	1.8%	1.7%	1.6%	1.5%
Average Revenue/User (In RMB)			¥38.00	¥83.00	¥116.37	¥144.29	¥178.92	¥207.55	¥240.76
<i>YoY growth</i>				118.4%	40.2%	24.0%	24.0%	16.0%	16.0%
Revenue from old games (In RMB)	¥1,627.78	¥1,994.76	¥2,704.10	¥3,631.21	¥4,132.22	¥4,987.81	¥5,837.35	¥6,440.51	¥6,869.88
<i>YoY growth</i>		22.5%	35.6%	34.3%	13.8%	20.7%	17.0%	10.3%	6.7%
<b>Revenue from old games (In US Dollars)</b>	<b>\$260.4</b>	<b>\$319.2</b>	<b>\$432.7</b>	<b>\$581.0</b>	<b>\$661.2</b>	<b>\$798.0</b>	<b>\$934.0</b>	<b>\$1,030.5</b>	<b>\$1,099.2</b>
<i>YoY growth</i>		22.5%	35.6%	34.3%	13.8%	20.7%	17.0%	10.3%	6.7%

# Valuation

## Bull Case Revenue Projections for DCF

Number of users from new games					40.0	56.0	78.4	101.9	132.5
<i>YoY growth</i>						40.0%	40.0%	30.0%	30.0%
Number of paying users from new games					0.58	0.74	0.9	1.1	1.3
<i>YoY growth</i>						26.6%	24.5%	19.7%	15.9%
% of users					1.5%	1.3%	1.2%	1.1%	1.0%
Average Revenue/User (In RMB)					\$116.4	\$144.3	\$178.9	\$207.6	\$240.8
<i>YoY growth</i>					20.1%	12.0%	12.0%	8.0%	8.0%
Revenue from new games (In RMB)					\$67.6	\$106.1	\$163.8	\$227.5	\$305.8
<i>YoY growth</i>						56.9%	54.3%	38.8%	34.4%
<b>Revenue from new games (In US Dollars)</b>					<b>\$10.8</b>	<b>\$17.0</b>	<b>\$26.2</b>	<b>\$36.4</b>	<b>\$48.9</b>
<i>YoY growth</i>						56.9%	54.3%	38.8%	34.4%
<b>Advertisement Revenue</b>	<b>\$20.6</b>	<b>\$27.0</b>	<b>\$38.2</b>	<b>\$42.5</b>	<b>\$54.9</b>	<b>\$65.8</b>	<b>\$75.7</b>	<b>\$84.8</b>	<b>\$95.0</b>
<i>YoY growth</i>		30.7%	41.8%	11.3%	29.0%	20.0%	15.0%	12.0%	12.0%
<b>Total Revenue</b>	<b>\$281.1</b>	<b>\$346.1</b>	<b>\$470.9</b>	<b>\$623.5</b>	<b>\$726.8</b>	<b>\$880.9</b>	<b>\$1,035.9</b>	<b>\$1,151.7</b>	<b>\$1,243.1</b>
<i>YoY growth</i>		23.1%	36.0%	32.4%	16.6%	21.2%	17.6%	11.2%	7.9%



# Valuation

## Bear & Bull Case Discounted Cash Flow Analysis

### Bear Case

#### Exit Multiple Method

Exit Multiple (EBITDA)	3.90x
Value of Terminal Cash Flows	\$1,439.4
<b>PV Terminal Cash Flows</b>	<b>\$868.7</b>
Sum of PV FCF	\$514.3
Implied Enterprise Value	\$1,383.1
Less: Debt	\$323.0
Add: Cash	\$640.0
<b>Implied Equity Value</b>	<b>\$1,700.1</b>
Shares Outstanding	52.51
<b>Implied Share Price</b>	<b>\$32.38</b>
Current Share Price	\$30.71
<b>Implied Upside</b>	<b>5.4%</b>

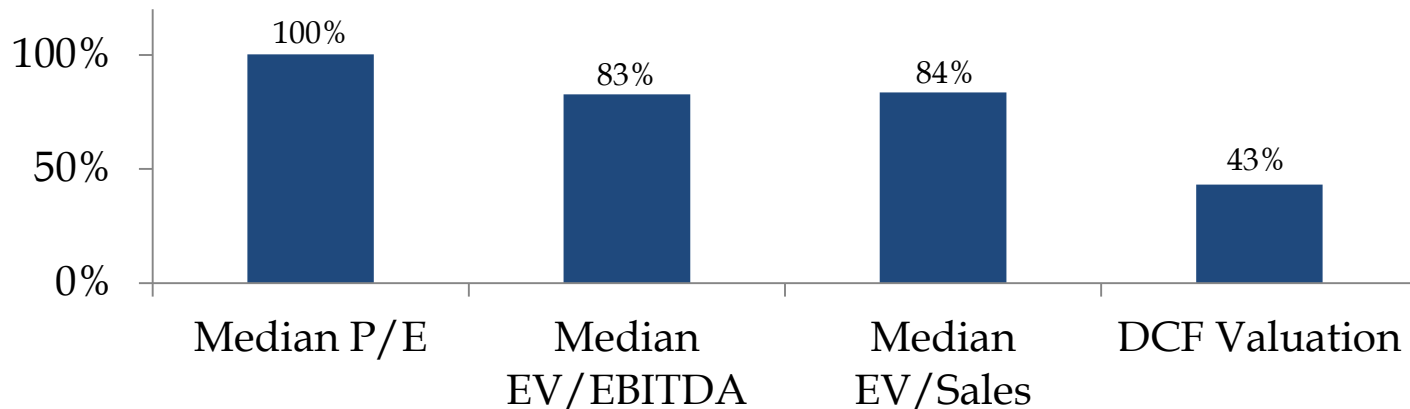
### Bull Case

#### Exit Multiple Method

Exit Multiple (EBITDA)	5.00x
Value of Terminal Cash Flows	\$3,221.7
<b>PV Terminal Cash Flows</b>	<b>\$1,944.5</b>
Sum of PV FCF	\$949.5
Implied Enterprise Value	\$2,894.0
Less: Debt	\$323.0
Add: Cash	\$640.0
<b>Implied Equity Value</b>	<b>\$3,211.0</b>
Shares Outstanding	52.51
<b>Implied Share Price</b>	<b>\$61.15</b>
Current Share Price	\$30.71
<b>Implied Upside</b>	<b>99.1%</b>

# Valuation

## Implied Upside from Valuations



## Sensitivity

Sensitivity Table

		Exit Multiple				
		2.90x	3.40x	3.90x	4.40x	4.90x
WACC	9.9%	30.8%	41.3%	51.7%	62.2%	72.7%
	10.9%	27.3%	37.3%	47.3%	57.4%	67.4%
	11.9%	23.8%	33.5%	43.1%	52.8%	62.4%
	12.9%	20.6%	29.9%	39.1%	48.4%	57.7%
	13.9%	17.5%	26.4%	35.3%	44.2%	53.1%

# Risks and Catalysts

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## Risks

- Rising labour and marketing expenses, causing LT margin compression
- New games from upcoming pipeline are unsuccessful
- Inability to release updates and expansions in games such as TLBB, causing significant decline in old users

## Catalysts

- Successful penetration into the mobile gaming sector and monetization
- Significant shareholder return within the year
- Margin expansion after cyclical marketing expense goes down
- Dou Po Cang Qiong replicating the success of TLBB



ChangYou.com

Buy Pitch

Steve Yang, Vinayak Modi  
29 - Jan - 2014



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