

# BARDI 20 Index<sup>©</sup>

The Entertainment Sector Index

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## BARDI 20 Definition and Objectives

The BARDI 20 Index is a global stock market index based on the market capitalizations of the 20 most relevant companies in the Entertainment Industry, specifically companies that engage in Movie/TV Production, Distribution, and Licensing. These companies are listed on: NYSE, NASDAQ, ENXTPA, SHSE, SEHK, SZSE, LSE, and TSE.

The BARDI 20 Index is a Free Float Market Capitalization Index; the constituents of the index have market capitalization between \$1 billion and \$160 billion (ca).

## Companies Qualifications/Criteria

In order to be part of the BARDI 20 Index, each company has to satisfy the following criteria:

- The BARDI 20 Index comprehends only companies with a market capitalization above \$1 billion;
- The BARDI 20 Index includes only companies that have had their IPOs at least for 3 years;
- The BARDI 20 Index includes only companies with at least \$200 million in Volume;
- Companies are included in the BARDI 20 Index if they engage in the following:
  - Production and Distribution of: Feature Films, Television, and Recorded Music (SVOD, VOD, Pay-Tv, Filmed Entertainment);
  - Content Management and Distribution; Multimedia and Digital Content;
  - Licensing of: TV Programming, Feature Films, Digital and Music Content.

## Selection of Companies

At the time this document is written, the BARDI 20 Index comprehends the following companies:

1. Comcast Corporation (NasdaqGS:CMCS.A)
2. The Walt Disney Company (NYSE:DIS)
3. Time Warner Inc. (NYSE:TWX)
4. Twenty-First Century Fox, Inc. (NasdaqGS:FOXA)
5. Vivendi SA (ENXTPA:VIV)
6. Viacom, Inc. (NasdaqGS:VIAB)
7. Toho Co. Ltd. (TSE:9602)
8. Alibaba Pictures Group Limited (SEHK:1060)
9. Huayi Brothers Media Corporation (SZSE:300027)
10. Beijing Enlight Media Co., Ltd. (SZSE: 300251)
11. Zhejiang Huace Film & TV Co., Ltd. (SZSE:300133)
12. Lions Gate Entertainment Corp. (NYSE:LGF)
13. Beijing Hualu Baina Film & TV Inc. (SZSE:300291)
14. Technicolor SA (ENXTPA:TCH)
15. Visual China Group Co., Ltd. (SZSE:000681)
16. Nan Hai Corp Ltd. (SEHK:680)
17. Shanghai New Culture Media Group Co., Ltd. (SZSE:300336)
18. Lead Eastern Investment Co., Ltd. (SZSE:000673)
19. Entertainment One, Ltd. (LSE:ETO)
20. Toei Co., Ltd. (TSE:9605)

## Constituents Description

*As of October 11<sup>th</sup>, 2016 (Base Date & First Value Date)*

### 1. Comcast Corporation

**KEY BUSINESS:** Cable Communications, Cable Networks, Broadcast TV, Filmed Entertainment, Theme Parks.

**Reasons for being included:**

- Market Cap > \$1 bil: \$156,742.9 (mm)
- IPO > 3 yrs: 1972
- Volume >200k: 4.80 (mm)

### 2. The Walt Disney Company

**KEY BUSINESS:** Media Networks, Broadcast, Parks & Resorts, TV Production & Distribution, Studio Entertainment, Parks & Resorts, Consumer Production.

**Reasons for being included:**

- Market Cap > \$1 bil: \$147,338.9 (mm)
- IPO > 3 yrs: 1968
- Volume >200k: 3.09 (mm)

### 3. Time Warner Inc.

**KEY BUSINESS:** Cable TV Network, Digital Media, Programming to SVOD, Premium Pay & Basic Tier TV; Production, Distribution, and Licensing of TV programming & Feature Films.

**Reasons for being included:**

- Market Cap > \$1 bil: \$60,979.5 (mm)
- IPO > 3 yrs: 1992
- Volume >200k: 1.27 (mm)

#### 4. Twenty-First Century Fox, Inc.

**KEY BUSINESS:** Cable Network Programming, Television, Filmed Entertainment, Direct Broadcasting.

**Reasons for being included:**

- Market Cap > \$1 bil: \$45,822.4 (mm)
- IPO > 3 yrs: 2004
- Volume >200k: 5.17 (mm)

#### 5. Vivendi SA

**KEY BUSINESS:** Pay-TV, Free-to-air channels, Cinema Films, TV series, Recorded Music, Digital Media, Video on Demand.

**Reasons for being included:**

- Market Cap > \$1 bil: \$25,440.3 (mm)
- IPO > 3 yrs: 2000
- Volume >200k: 6.85 (mm)

#### 6. Viacom, Inc.

**KEY BUSINESS:** TV Programs, Motion Pictures, Short-form Content, Applications, Games, Consumer Products, Social Media.

**Reasons for being included:**

- Market Cap > \$1 bil: \$14,114.6 (mm)
- IPO > 3 yrs: 2005
- Volume >200k: 3.30 (mm)

#### 7. Toho Co., Ltd.

**KEY BUSINESS:** Production, Distribution, and Movie Rentals; TV Programs, Movie Pamphlets, Video and Audio Software; Management of: Movie Theaters and Sports Parks.

**Reasons for being included:**

- Market Cap > \$1 bil: \$5,614.4 (mm)

- IPO > 3 yrs: 1992
- Volume >200k: 1.02 (mm)

## **8. Alibaba Pictures Group Limited**

**KEY BUSINESS:** Film and TV copyrights investment, production, & distribution; Magazine & TV Advertising.

**Reasons for being included:**

- Market Cap > \$1 bil: \$5,427.9 (mm)
- IPO > 3 yrs: 2012
- Volume >200k: 7.23 (mm)

## **9. Huayi Brothers Media Corporation**

**KEY BUSINESS:** Ownership, Production, and Distribution of Film and TV Productions; Talent Agency, Music, Cultural Tourism, Video Games, Location-based Entertainment.

**Reasons for being included:**

- Market Cap > \$1 bil: \$5,134.4 (mm)
- IPO > 3 yrs: 2009
- Volume >200k: 12.25 (mm)

## **10. Beijing Enlight Media Co., Ltd.**

**KEY BUSINESS:** Production and Distribution of TV Programs.

**Reasons for being included:**

- Market Cap > \$1 bil: \$4,778.7 (mm)
- IPO > 3 yrs: 2011
- Volume >200k: 9.63 (mm)

## **11. Zhejiang Huace Film & TV Co., Ltd.**

**KEY BUSINESS:** Investment, Production, and Distribution of Film & TV Dramas.

**Reasons for being included:**



- Market Cap > \$1 bil: \$3,599.4 (mm)
- IPO > 3 yrs: 2010
- Volume >200k: 4.03 (mm)

## 12. Lions Gate Entertainment Corp.

**KEY BUSINESS:** Motion Picture Production, Television Production.

**Reasons for being included:**

- Market Cap > \$1 bil: \$2,936.3 (mm)
- IPO > 3 yrs: 1998
- Volume >200k: 1.30 (mm)

## 13. Beijing Hualu Baina Film & TV Inc.

**KEY BUSINESS:** Film & TV Production, Content Marketing, Media Agency.

**Reasons for being included:**

- Market Cap > \$1 bil: \$2,822.5 (mm)
- IPO > 3 yrs: 2012
- Volume >200k: 1.94 (mm)

## 14. Technicolor SA

**KEY BUSINESS:** Equipment, Content Management & Distribution, Video, Game, Music DVD Distribution, Software Libraries, Tech Licensing.

**Reasons for being included:**

- Market Cap > \$1 bil: \$2,590.4 (mm)
- IPO > 3 yrs: 1999
- Volume >200k: 1.50 (mm)

## 15. Visual China Group Co., Ltd.

**KEY BUSINESS:** Visual Communications, New Media Business; Imagery, Videos, Music, Multimedia, and Digital Content; Licensing and Copyright Distribution platform; Entertainment Content.

**Reasons for being included:**

- Market Cap > \$1 bil: \$2,517.2 (mm)
- IPO > 3 yrs: 2014
- Volume >200k: 8.2 (mm)

**16. Nan Hai Corp Ltd.**

**KEY BUSINESS:** Culture & Media, Property Development, Corporate IT Services; Film Distribution and Production; Cinemas Operation; Advertising.

**Reasons for being included:**

- Market Cap > \$1 bil: \$1,865.6 (mm)
- IPO > 3 yrs: 1992
- Volume >200k: 78.7 (mm)

**17. Shanghai New Culture Media Group Co., Ltd.**

**KEY BUSINESS:** Production and Distribution of Radio, Film, and TV Programs; TV plays, Movies.

**Reasons for being included:**

- Market Cap > \$1 bil: \$1,637.5 (mm)
- IPO > 3 yrs: 2012
- Volume >200k: 3.18 (mm)

**18. Lead Eastern Investment Co., Ltd.**

**KEY BUSINESS:** Film and TV Content Production; Entertainment Operations.

**Reasons for being included:**

- Market Cap > \$1 bil: \$1,538.0 (mm)
- IPO > 3 yrs: 1997
- Volume >200k: 20.35 (mm)

**19. Entertainment One Ltd.**

**KEY BUSINESS:** Acquisition, Production, and Distribution of TV, Family, Film, and Music Content.

**Reasons for being included:**

- Market Cap > \$1 bil: \$1,538.0 (mm)
- IPO > 3 yrs: 1997
- Volume >200k: 20.35 (mm)

**20. Toei Co., Ltd.**

**KEY BUSINESS:** Theatrical Movies, TV dramas, Direct-to-Video, and Anime Production; Movie Theatres and Cinema Complexes Management; Video Content and Media Distribution; Broadcasting Media.

**Reasons for being included:**

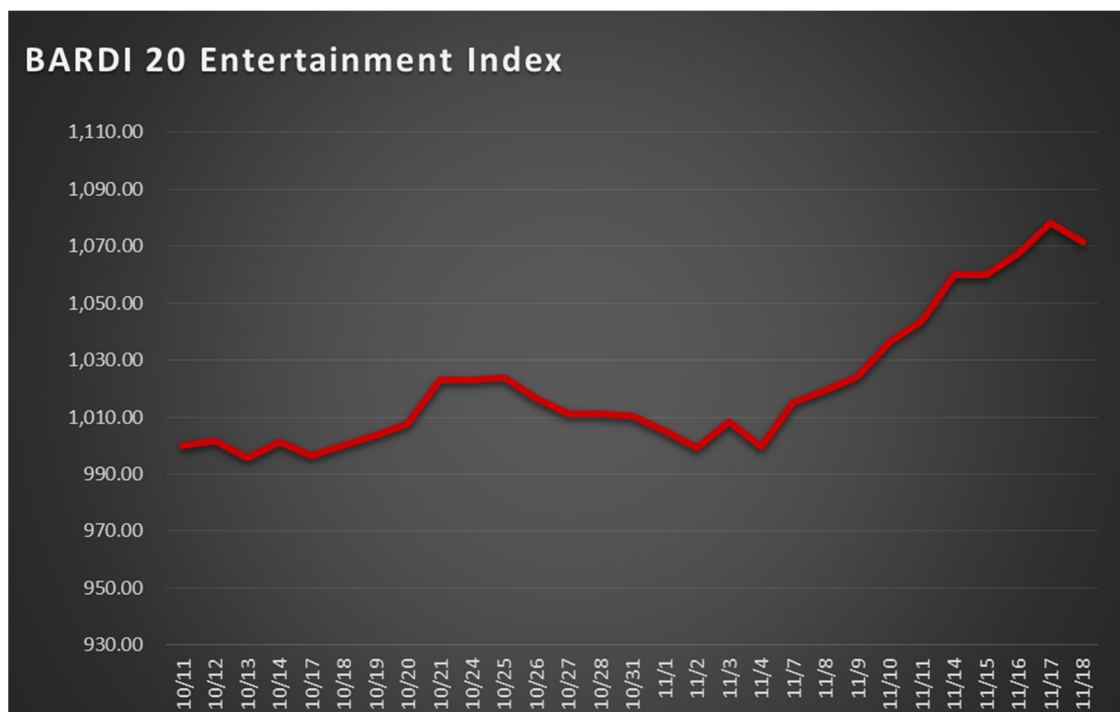
- Market Cap > \$1 bil: \$1,538.0 (mm)
- IPO > 3 yrs: 1997
- Volume >200k: 20.35 (mm)

## BARDI 20 Index Value

We collected data starting from the Base Date (October 11<sup>th</sup>, 2016) until November 18<sup>th</sup>, 2016. The process to get the Index Value from the total of the 20 companies' Free Float Market Caps can be summarized as follows:

- We established the Weighted Market Cap Divisor by taking the sum of all Free Float Market Cap of the 20 companies and dividing it by the Base Date (October 11<sup>th</sup>, 2016) Index Required, which we set to 1,000;
- For the Base Date our Weighted Market Cap Divisor turned out to be 444.85;
- We gathered the total of the 20 companies' Free Float Market Caps for each day and divided it by our Weighted Market Cap Divisor;
- We utilized the Excel add-in *Stock Connector* in order to have live prices for each stock each day, as set by their primary exchange;
- Furthermore, we calculated the percentage change for each day (since October 11<sup>th</sup>, 2016).

Below there is the BARDI 20 Entertainment Index graph, showing the index movements from October 11<sup>th</sup> to November 18<sup>th</sup> 2016:



## Index Specifics

As of November 2nd, 2016

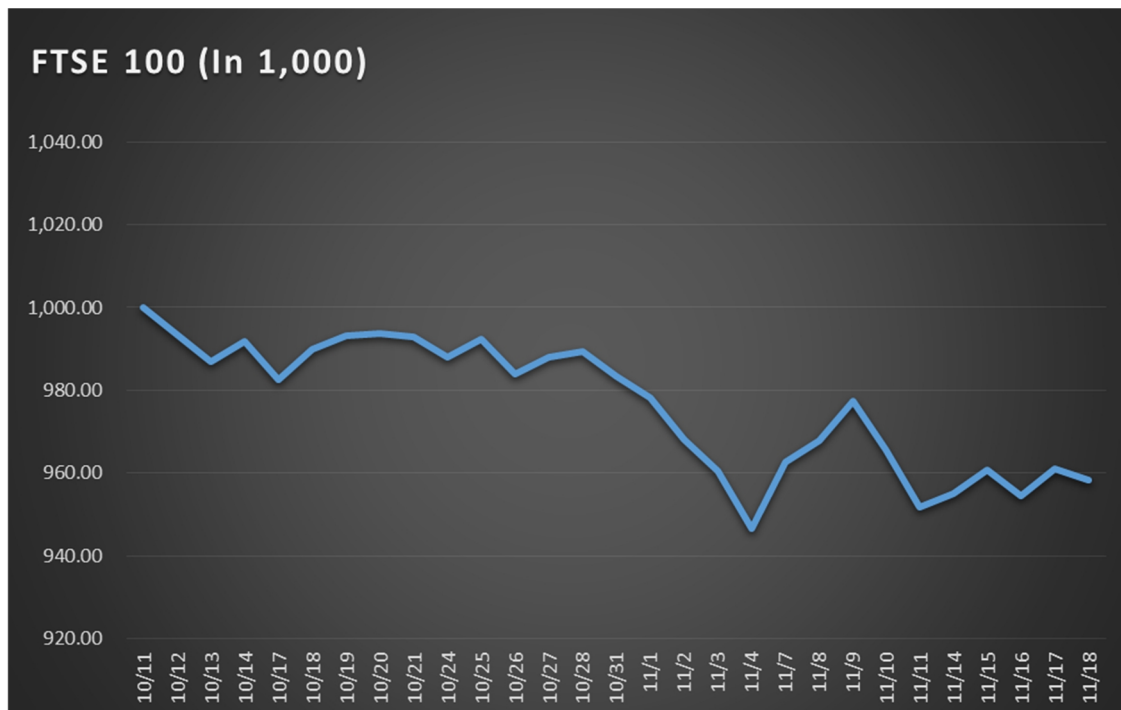
Attributes	BARDI 20
<b>Number of constituents</b>	20
<b>Net Mcap (USDmm)</b>	492,917.78
<b>Dividend Yield %</b>	1.62
<b>Constituents Sizes (Net Mcap USDmm)</b>	
Average	24,575.50
Largest	147,708.70
Smallest	1,006.60
Median	4,053.50
<b>Weight of Largest Constituent (%)</b>	29.97
<b>Top 5 Holdings (% Index MCap)</b>	89.68

## BARDI 20 Compared to FTSE 100

### ➤ FTSE 100

The FTSE 100 (Financial Times Stock Exchange) is one of the most popular and widely used stock market index around the globe. The FTSE 100 is part of the FTSE UK Series and is designed to measure the performance of the 100 largest companies traded on the London Stock Exchange that pass screening for size and liquidity. The FTSE 100 utilizes the market-capitalization weighted methodology.

Below there is the FTSE 100 graph, showing the index movements from October 11<sup>th</sup> to November 18<sup>th</sup> 2016, converted in 1,000 in order to compare it with the BARDI 20.



## ➤ BARDI 20 & FTSE 100

We decided to compare the BARDI 20 Index to the FTSE 100 because it represents a benchmark for leading market participants in the UK. In order to compare the two indices, we collected data and calculated daily returns from October 11<sup>th</sup>, 2016 to November 18<sup>th</sup>, 2016.

Looking at the Average Daily Returns, the BARDI 20 shows better returns during this period; indeed, the BARDI 20 performed 0.0024 while the FTSE 100 did -0.0015. Then, by annualizing these returns, the resulting percentage for the BARDI 20 is 84.82%, while for the FTSE 100 IS -31.68%.

As for the standard deviation, the BARDI 20 shows a 0.0071 while the FTSE 100 0.0079; by annualizing both standard deviations, we get 11.30% for the BARDI 20 and 12.52% for the FTSE 100.

See details below.

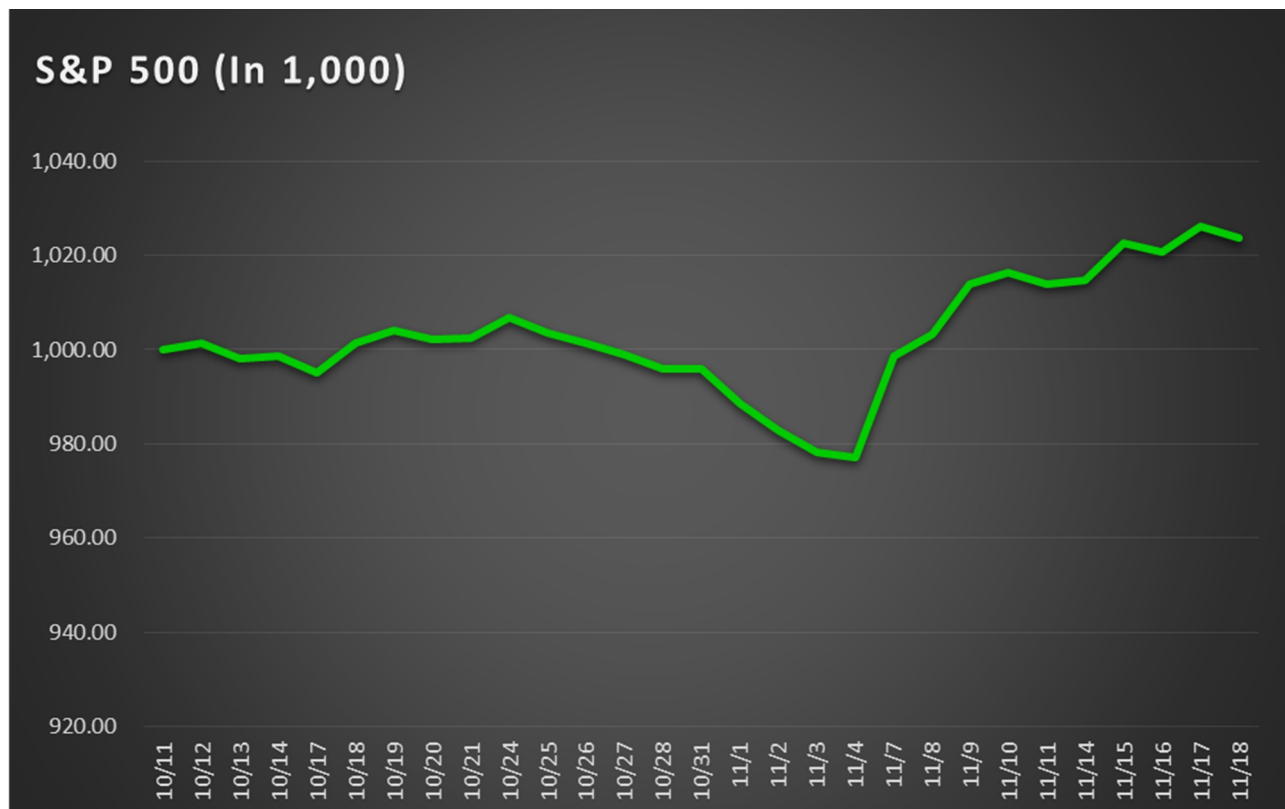
	BARDI 20	FTSE 100
<b>Daily Average Return</b>	0.0024	-0.0015
<b>Annualized Return</b>	84.82%	-31.68%
<b>Standard Deviation</b>	0.0071	0.0079
<b>Annualized St. Dev.</b>	11.30%	12.52%

## BARDI 20 Compared to S&P 500

### ➤ S&P 500

The S&P 500 is widely regarded as the best single gauge of large-cap U.S. equities. Over \$7.8 trillion is benchmarked to the index, with index assets comprising approximately \$2.2 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

Below there is the S&P 500 graph, showing the index movements from October 11<sup>th</sup> to November 18<sup>th</sup> 2016, converted in 1,000 in order to compare it with the BARDI 20.





## ➤ BARDI 20 & S&P 500

We decided to compare the BARDI 20 Index to the S&P 500 because of its wide market breadth of the large-cap companies included in the index. Indeed, the S&P 500 provides a broad view on the economic health of the United States. As we did with the FTSE 100, in order to compare the two indexes, we collected data and calculated daily returns from October 11<sup>th</sup>, 2016 to November 18<sup>th</sup>, 2016.

Looking at the Average Daily Return, the BARDI 20 shows better returns during the period analyzed; in fact, the BARDI 20 performed 0.0024 while the S&P 500 did 0.0008. Then, by transforming these returns on an annual basis, the BARDI 20 showed a 84.82% return, while as for the S&P 500 a 23.16%.

As for the Standard Deviation, the BARDI 20 shows a 0.0071 while the S&P 500 0.0059; by annualizing the standard deviation for both indexes, we get 11.30% for the BARDI 20 and 9.27% for the S&P 500.

See details below.

	BARDI 20	S&P 500
<b>Daily Average Return</b>	0.0024	0.0008
<b>Annualized Return</b>	84.82%	23.16%
<b>Standard Deviation</b>	0.0071	0.0059
<b>Annualized St. Dev.</b>	11.30%	9.27%



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