

Bitcoin Investment Trust (GBTC)

Renewed Interest by Large Financial Institutions and Media; Reiterating OUTPERFORM and Raising BTC Price Target to \$600

- We believe bitcoin and its associated blockchain technology have the potential to disrupt the existing financial infrastructure over the next several years, and believe the value of the bitcoin currency (BTC) will benefit from this trend. Please see our GBTC initiation report [here](#).
- We believe the value of bitcoin has started moving up recently as broad positive media coverage (page 3) has started to sway sentiment.
- Large financial institutions continue to invest and investigate uses of bitcoin and its underlying technologies (e.g. Blockchain) at an increasing pace (p4).
- We believe that Blockchain is to Bitcoin as *Intranet* is to *Internet*. We believe there may be some applications that narrowly use a distributed ledger without a valuable native token, but those will end up being a small part of the solutions the technology creates. We believe the reason financial institutions are insisting on "Blockchain not Bitcoin" is for internal and regulatory compliance. We expect that even the narrow solutions leveraging only a distributed ledger will end up being anchored on the bitcoin blockchain sooner or later.
- We continue to observe consistent transaction growth, especially from applications such as remittance and multi-signature (pages 5-6). We are also witnessing an increase in payment fees over time, which should help supplant bitcoin issuing as the revenue source for the transaction processors running the bitcoin network.
- We detail our valuation framework on pages 7-9 to arrive at our target of \$600/BTC (\$60/GBTC) - we employ a supply/demand methodology based on utilization of future applications. With bitcoin supply mostly predetermined, we estimate bitcoin applications' large and growing addressable market, anticipate an inflection point of bitcoin application adoption 5-10 years out and apply a high discount rate to account for uncertainty.
- Reiterate OUTPERFORM rating and raising our GBTC price target to \$60 (equivalent to \$600/BTC) from \$40 based on less conservative supply assumptions. The main change to our model is a higher proportion of dormant or held-for-investment bitcoin.
- Risks to our price target include the fact that BTC could very well go to zero due to lack of cash flow, increased government regulations, lack of consumer adoption, rise of superior alternative crypto currency, failure of the protocol, and cyber hacks.

November 4, 2015

Price
\$52.00

Rating
OUTPERFORM

12-Month Price Target
\$60 (from \$40)

Gil Luria



Aaron Turner



Company Information

Shares Outst (M)	1,382.0
Market Cap (B)	\$71.8
52-Wk Range	\$21.22 - \$55.00

Shares Outst - BTC(M)	14,800
Market Cap - BTC (B)	\$7,152

Company Description

The Bitcoin Investment Trust (BIT) is a private, open-ended trust that is invested exclusively in bitcoin and derives its value solely from the price of bitcoin. BIT was launched in 2013 by Grayscale Investments, a wholly-owned subsidiary of Digital Currency Group.



Source: Thomson Reuters

Wedbush Securities does and seeks to do business with companies covered in its research reports. Thus, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Please see page 10 of this report for analyst certification and important disclosure information.

Risks to Bitcoin

Future risks that may face bitcoins, the Shares' underlying asset, may be:

- Bitcoin does not generate any cash flow.
- Changes in global bitcoin demand, by changing levels of acceptance by merchants and consumers, may adversely affect market pricing of bitcoins.
- Cyber theft of bitcoins by or from online bitcoin wallet providers, or theft from individual bitcoin wallets.
- Monetary policies of central banks and governments may impose risk by trade restriction or currency revaluation, possibly having adverse effects on bitcoin market pricing.
- Increased competition from other payment technologies, services, or forms of crypto currency.
- The maintenance and development of the open-source software protocol of the Bitcoin Network.

Risks to GBTC Shares

Future risks that may face the Trust, and its Shares, may be:

- Regulatory changes that may change the way BIT operates in regards to the way the Shares are traded on its designated exchange.
- Countries curtailing or outlawing trading and/or ownership of bitcoins.
- Additional expenses incurred by the Trust due to possible future regulatory compliance changes, though the Trust holds the ability to terminate should these expenses be disadvantageous to investors.
- Due to the Shares' direct relationship to historically volatile bitcoin market prices, the value of the shares may fluctuate.
- BIT is a passive investment vehicle; therefore it is not actively managed and is susceptible to losses that may have been mitigated by active trading.

Disclosures

At the time of publication, Wedbush Securities owns a nominal amount of BTC and has invested in bitcoin-related companies.

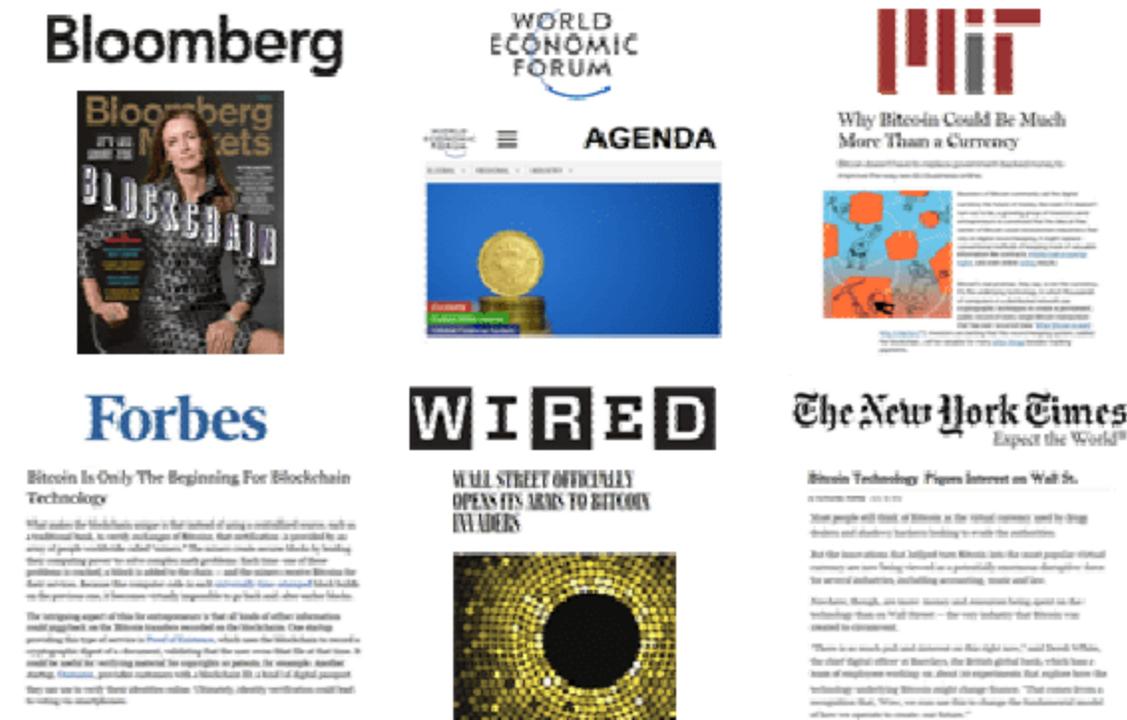
Other mandatory disclosures appear in the back of the report.

Figure 1: The Economist Print Edition



Source: Wedbush Securities, Inc.

Figure 2: Recent Coverage



Source: Wedbush Securities, Inc.

Figure 3: Financial Institutions and Other Corporate Adoption of Bitcoin and Blockchain

Companies investing in Blockchain Technology

Andreessen Horowitz
 BBVA
 Battery Ventures
 Greylock Partners
 Capital One
 General Catalyst Partners
 Khosla Ventures
 USAA
 Visa
 Bain Capital Ventures
 CIBC
 FirstMark Capital
 Mastercard
 New York Life
 Novel TMT
 Oak HC/FT
 RRE Ventures
 Solon Mack Capital
 Transamerica Ventures
 Goldman Sachs
 NYSE
 NASDAQ
 UBS
 Citi
 Barclays
 [REDACTED]
 Wedbush
 CME

Investigating Blockchain Use Cases

BNY Mellon
 IBM
 US Federal Reserve
 Samsung
 Santander

Companies incorporating Bitcoin payment options

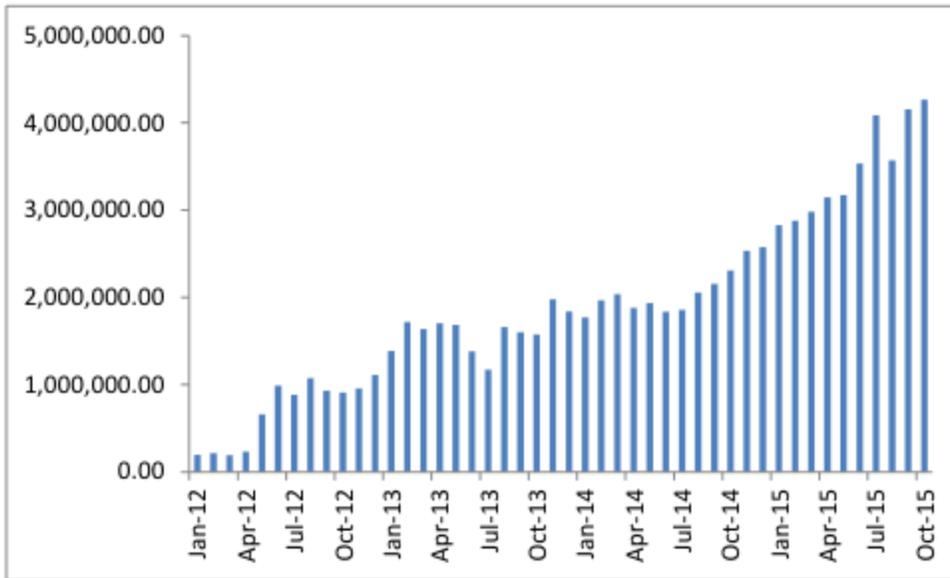
PayPal/Braintree
 Stripe
 NCR
 Square
 Intuit
 First Data
 Global Payments
 Toshiba, VisualTouch

Companies accepting Bitcoin payments

Microsoft
 Dell
 United Way
 Wikipedia
 Wordpress
 Expedia
 Dish
 Overstock
 American Red Cross
 Time Magazine
 Mozilla
 Newegg
 Reddit
 Soundcloud
 Zynga
 Subway (very few)
 Virgin Galactic
 Sacramento Kings
 Gylt
 TigerDirect
 Chicago Sun-Times
 OKCupid
 Rakuten (via subsidiary Rakuten Super Logistics)
 OpenSSL
 Khan Academy

Source: Wedbush Securities, Inc.

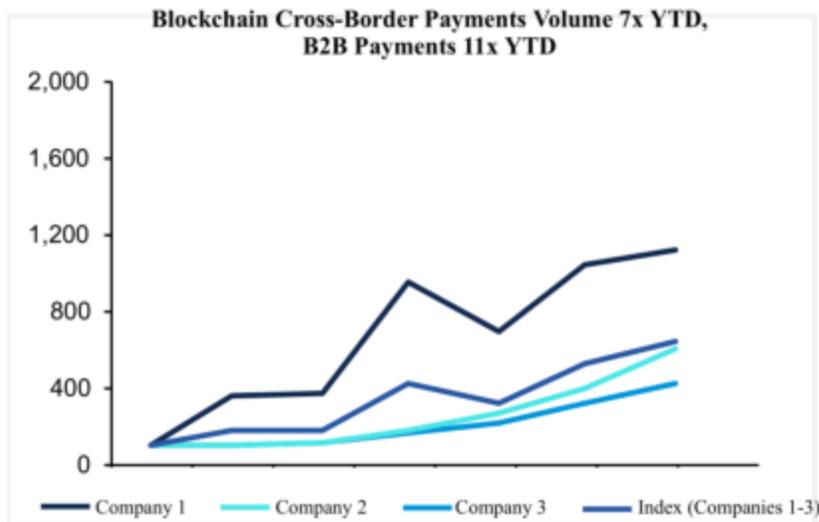
Figure 4: Monthly Bitcoin Transactions



Source: Blockchain.info, Wedbush Securities, Inc.

Figure 5:

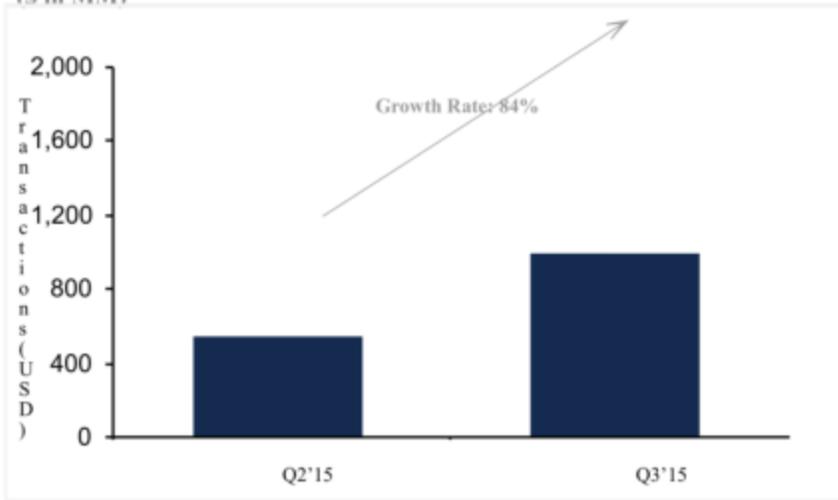
Pantera Capital Portfolio Companies Growth Rates



Source: Pantera Capital, Wedbush Securities, Inc.

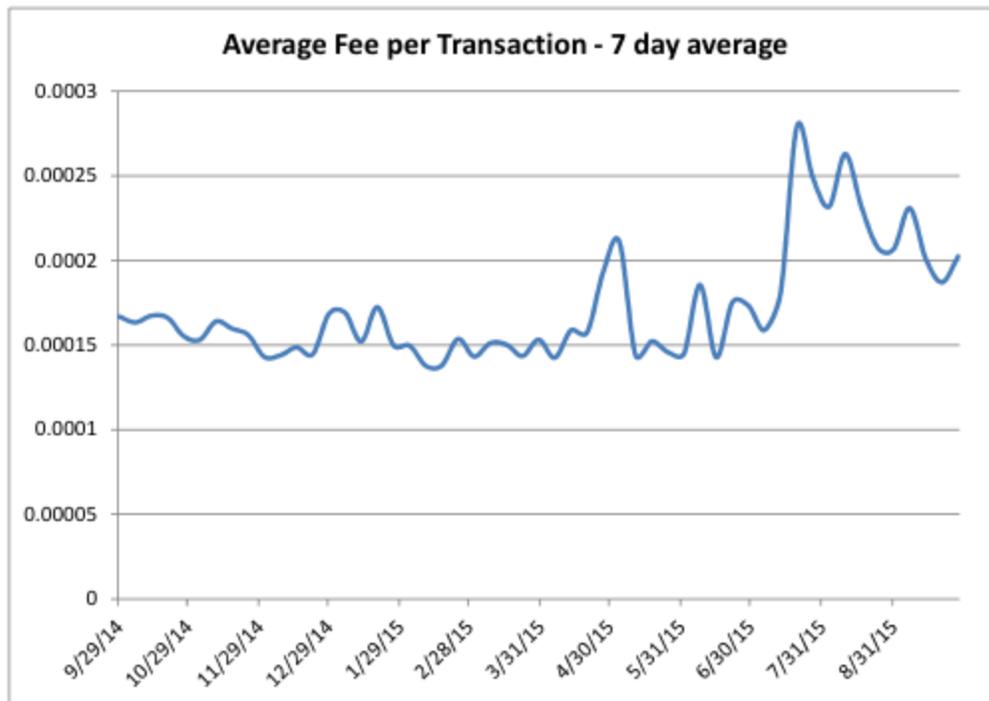
Figure 6: BitGo Transaction Volume

BitGo's Transaction Volume
(S in MM)



Source: BitGo, Wedbush Securities, Inc.

Figure 7: Average Fee per Transaction



Source: Wedbush Securities, Inc.

Valuation

Our approach is to use a commodity-like valuation that values each BTC as a “packet” in limited supply that fuels the bitcoin network. The more the bitcoin network is utilized for current and future applications, the more demand for the packet. By aggregating the utilization of the various applications (Figure 1) we arrive at our \$600 BTC price target which translates to \$60 per share of GBTC.

We start with the supply which is predetermined by the bitcoin software to create new “shares” in order to compensate the network node operators (i.e. miners). Of those, the relevant portion is the portion neither dormant nor held for investment. Those bitcoin cannot support economic activity and are therefore excluded from the relevant supply. We expect that proportion to fall in proportion as economic activity picks up and the number of bitcoin available to support applications to grow.

We then look at the four current applications for bitcoin – online payments, remittance, micro transactions and “banking” for the unbanked – as well as a catch all other category that includes black market activity and any other future application such as machine to machine (Internet of Things) and anchoring other blockchains.

For each of these applications we attempt to forecast demand by looking at the total addressable volumes and potential share bitcoin can achieve over the next 10 years. For micro transactions we use the total internet advertising market as a proxy for the size of the opportunity, considering the possibility direct monetization of content will help supplant the internet advertising model. We assume in our forecasts 10-20% bitcoin penetration for all these various opportunities by 2025.

In order to assess the amount of bitcoin required to support this level of activity we apply different levels of velocity. For example, if a consumer replenishes their bitcoin wallet every month that would equate to 12x annual velocity for their bitcoin. We apply velocity levels ranging from 5.5 for unbanked and other applications (current velocity of bitcoin) and 12 times for payments and remittance.

The ultimate calculation takes the *total bitcoin required to support these applications* in 2025 divided by the *number of bitcoin available for economic activity* discounted to the current period by a *discount rate*. We use a very high 40% discount rate to illustrate the uncertainty regarding these outcomes ten years out.

Figure 8: Bitcoin Supply Largely Predetermined

	2014A	2015E	2020E	2025E
Total Bitcoin in Circulation (End of Year)	13,125,000	15,000,000	18,410,000	20,343,750
% of total		71.43%	87.67%	96.88%
Held for Investment or Dormant %	50%	50%	41%	33%
Held as Working Capital %	50%	50%	60%	67%
Bitcoin Available for Transactions	6,562,500	7,500,000	10,953,950	13,562,568

Source: Wedbush Securities, Inc.

Figure 9: Large and Growing Addressable Market

\$ Billion	2014A	2015E	2020E	2025E
Online Payments	1,500	1,725	3,379	5,955
Remittances	435	457	583	744
Micro Transactions	540	567	724	924
Unbanked	4,305	4,435	5,141	5,960
Other	1,829	1,902	2,314	2,816
Total	8,609	9,086	12,141	16,398

Growth Rates

Online Payments	15%	12%	12%
Remittances	5%	5%	5%
Micro Transactions	5%	5%	5%
Unbanked	3%	3%	3%
Other	4%	4%	4%

Source: Wedbush Securities, Inc.



Figure 10: Expect Market Share "Hockey Stick" 5-10 Years Out

<u>Bitcoin Share</u>				
Online Payments	0.02%	0.04%	1.35%	10.00%
Remittances	0.01%	0.03%	2.16%	20.00%
Micro Transactions	0.01%	0.03%	2.16%	20.00%
Unbanked	0.001%	0.003%	0.73%	10.00%
Other	0.01%	0.02%	0.64%	10.00%
<u>Capacity Supported by Bitcoin</u>				
Online Payments	\$ 0.32	\$ 0.7	\$ 45.6	\$ 595.5
Remittances	\$ 0.04	\$ 0.1	\$ 12.6	\$ 148.8
Micro Transactions	\$ 0.05	\$ 0.2	\$ 15.6	\$ 184.7
Unbanked	\$ 0.04	\$ 0.1	\$ 37.5	\$ 596.0
Other	\$ 0.18	\$ 0.4	\$ 14.8	\$ 281.6
Total	\$ 0.64	\$ 1.5	\$ 126.1	\$ 1,806.6
<u>Assumed Annual Velocity</u>				
Online Payments	12	12	12	12
Remittances	12	12	12	12
Micro Transactions	12	12	12	12
Unbanked	6	6	6	6
Other	6	6	6	6
<u>Bitcoin Monetary Base Required</u>				
Online Payments	\$ 0.03	\$ 0.06	\$ 3.80	\$ 49.63
Remittances	\$ 0.00	\$ 0.01	\$ 1.05	\$ 12.40
Micro Transactions	\$ 0.00	\$ 0.01	\$ 1.30	\$ 15.39
Unbanked	\$ 0.01	\$ 0.02	\$ 6.81	\$ 108.36
Other	\$ 0.03	\$ 0.07	\$ 2.69	\$ 51.19
Total BTC Monetary Base Required	\$ 0.08	\$ 0.18	\$ 15.66	\$ 236.97

Source: Wedbush Securities, Inc.

Figure 11: High Discount Rate to Account for Uncertainty

Year	0	5	10
Bitcoin \$ Monetary Base Required /			
Bitcoins Available for Transactions	\$12	\$24	\$1,429
			\$17,473
BTC Price	\$462	11/4/2015	
Excess Value Based on Future Demand	\$450		
PV \$USD/BTC	\$604	<=	
Discount Rate	40%		

Source: Wedbush Securities, Inc.

Figure 12: Full Valuation Framework

Supply												
	2014A	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Total Bitcoin in Circulation (End of Year)	13,125,000	15,000,000	16,025,000	16,656,000	17,287,000	17,918,000	18,410,000	18,725,000	19,041,000	19,357,000	19,687,500	20,343,750
% of total		71.43%	78.31%	79.31%	82.32%	85.32%	87.67%	89.17%	90.67%	92.18%	93.75%	96.88%
Held for Investment or Dormant %	50%	58%	48%	46%	44%	42%	41%	39%	38%	36%	35%	33%
Held as Working Capital %	50%	50%	52%	54%	56%	58%	60%	61%	63%	64%	66%	67%
Bitcoin Available for Transactions	6,562,500	7,500,000	8,333,000	8,994,240	9,680,720	10,392,440	10,953,950	11,422,250	11,900,625	12,388,480	12,896,313	13,562,568
Demand												
\$ Billion												
	2014A	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Online Payments	1,500	1,725	1,984	2,281	2,624	3,017	3,379	3,785	4,239	4,747	5,317	5,955
Remittances	435	457	480	504	529	555	583	612	643	675	709	744
Micro Transactions	540	567	595	625	656	689	724	760	798	838	880	924
Unbanked	4,305	4,435	4,568	4,705	4,846	4,991	5,141	5,295	5,454	5,618	5,786	5,960
Other	1,829	1,902	1,978	2,057	2,140	2,225	2,314	2,407	2,503	2,603	2,707	2,816
Growth Rates												
Online Payments		15%	15%	15%	15%	15%	12%	12%	12%	12%	12%	12%
Remittances		5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Micro Transactions		5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Unbanked		3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Other		4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Bitcoin Share												
Online Payments	0.02%	0.04%	0.08%	0.17%	0.34%	0.67%	1.35%	2.70%	5.39%	7.00%	9.00%	10.00%
Remittances	0.01%	0.03%	0.09%	0.27%	0.54%	1.08%	2.16%	4.32%	8.64%	17.28%	18.50%	20.00%
Micro Transactions	0.01%	0.03%	0.09%	0.27%	0.54%	1.08%	2.16%	4.32%	8.64%	17.28%	18.50%	20.00%
Unbanked	0.001%	0.003%	0.01%	0.03%	0.08%	0.24%	0.73%	1.46%	2.92%	5.83%	7.50%	10.00%
Other	0.01%	0.02%	0.04%	0.08%	0.16%	0.32%	0.64%	1.28%	2.56%	5.12%	7.50%	10.00%
Capacity Supported by Bitcoin												
Online Payments	\$ 0.32	\$ 0.7	\$ 1.7	\$ 3.8	\$ 8.8	\$ 20.3	\$ 45.6	\$ 102.1	\$ 228.6	\$ 332.3	\$ 478.5	\$ 595.5
Remittances	\$ 0.04	\$ 0.1	\$ 0.4	\$ 1.4	\$ 2.9	\$ 6.0	\$ 12.6	\$ 26.4	\$ 55.5	\$ 116.6	\$ 131.1	\$ 148.8
Micro Transactions	\$ 0.05	\$ 0.2	\$ 0.5	\$ 1.7	\$ 3.5	\$ 7.4	\$ 15.6	\$ 32.8	\$ 68.9	\$ 144.8	\$ 162.7	\$ 184.7
Unbanked	\$ 0.04	\$ 0.1	\$ 0.4	\$ 1.3	\$ 3.9	\$ 12.1	\$ 37.5	\$ 77.2	\$ 159.0	\$ 327.6	\$ 434.0	\$ 596.0
Other	\$ 0.18	\$ 0.4	\$ 0.8	\$ 1.6	\$ 3.4	\$ 7.1	\$ 14.8	\$ 30.8	\$ 64.1	\$ 133.3	\$ 203.1	\$ 281.6
Total	\$ 0.64	\$ 1.5	\$ 3.8	\$ 9.8	\$ 22.6	\$ 53.0	\$ 126.1	\$ 269.3	\$ 576.2	\$ 1,054.6	\$ 1,409.4	\$ 1,806.6
Assumed Annual Velocity												
Online Payments	12	12	12	12	12	12	12	12	12	12	12	12
Remittances	12	12	12	12	12	12	12	12	12	12	12	12
Micro Transactions	12	12	12	12	12	12	12	12	12	12	12	12
Unbanked	6	6	6	6	6	6	6	6	6	6	6	6
Other	6	6	6	6	6	6	6	6	6	6	6	6
Bitcoin Monetary Base Required												
Online Payments	\$ 0.03	\$ 0.06	\$ 0.14	\$ 0.32	\$ 0.74	\$ 1.69	\$ 3.80	\$ 8.50	\$ 19.05	\$ 27.69	\$ 39.88	\$ 49.63
Remittances	\$ 0.00	\$ 0.01	\$ 0.04	\$ 0.11	\$ 0.24	\$ 0.50	\$ 1.05	\$ 2.20	\$ 4.63	\$ 9.72	\$ 10.92	\$ 12.40
Micro Transactions	\$ 0.00	\$ 0.01	\$ 0.04	\$ 0.14	\$ 0.30	\$ 0.62	\$ 1.30	\$ 2.74	\$ 5.74	\$ 12.06	\$ 13.56	\$ 15.39
Unbanked	\$ 0.01	\$ 0.02	\$ 0.07	\$ 0.23	\$ 0.71	\$ 2.21	\$ 6.81	\$ 14.04	\$ 28.92	\$ 59.57	\$ 78.90	\$ 108.36
Other	\$ 0.03	\$ 0.07	\$ 0.14	\$ 0.30	\$ 0.62	\$ 1.29	\$ 2.69	\$ 5.60	\$ 11.65	\$ 24.23	\$ 36.92	\$ 51.19
Total BTC Monetary Base Required	\$ 0.08	\$ 0.18	\$ 0.44	\$ 1.10	\$ 2.61	\$ 6.31	\$ 15.66	\$ 33.08	\$ 69.99	\$ 133.28	\$ 180.18	\$ 236.97
Valuation												
Bitcoin \$ Monetary Base Required /			1	2	3	4	5	6	7	8	9	10
Bitcoins Available for Transactions	\$12	\$24	\$53	\$123	\$269	\$608	\$1,429	\$2,896	\$5,881	\$10,758	\$13,973	\$17,473
BTC Price	\$462	11/4/2015										
Excess Value Based on Future Demand	\$450											
PV \$USD/BTC	\$694											
Discount Rate	40%											

Source: Wedbush Securities, Inc.

Analyst Biography

Gil Luria is a Managing Director, Equity Research, covering Financial Technology stocks at Wedbush Securities. He joined Wedbush in 2005 and was previously at Sanford C. Bernstein covering large U.S. telecommunications companies. Prior to that he was a Manager with Deloitte Consulting focused on telecommunications companies.

Mr. Luria holds a B.A. in Economics from Hebrew University and an M.B.A. from Columbia Business School.

Gil's Edge: Gil relies on bottom-up fundamental analysis building on his deep understanding of technology and its implications for his companies.

Analyst Certification

I, Gil Luria, Aaron Turner, certify that the views expressed in this report accurately reflect my personal opinion and that I have not and will not, directly or indirectly, receive compensation or other payments in connection with my specific recommendations or views contained in this report.

Disclosure information regarding historical ratings and price targets is available at [REDACTED]

Investment Rating System:

Outperform: Expect the total return of the stock to outperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Neutral: Expect the total return of the stock to perform in-line with the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Underperform: Expect the total return of the stock to underperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

The Investment Ratings are based on the expected performance of a stock (based on anticipated total return to price target) relative to the other stocks in the analyst's coverage universe (or the analyst's team coverage).*

Rating Distribution (as of September 30, 2015)	Investment Banking Relationships (as of September 30, 2015)
Outperform: 55%	Outperform: 24%
Neutral: 43%	Neutral: 3%
Underperform: 2%	Underperform: 0%

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Wedbush Equity Research Disclosures as of November 4, 2015

Company	Disclosure
Bitcoin Investment Trust	1

Research Disclosure Legend

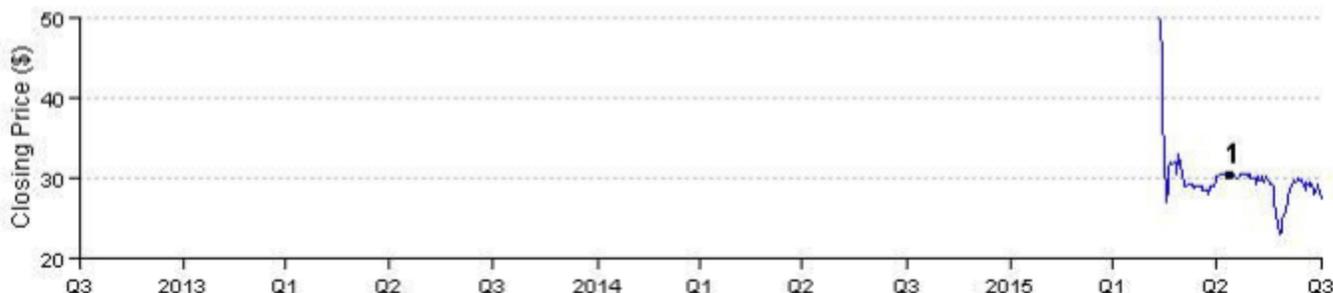
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4. WS has received compensation for investment banking services within the last 12 months.
5. WS provided investment banking services within the last 12 months.
6. WS is acting as financial advisor.
7. WS expects to receive compensation for investment banking services within the next 3 months.
8. WS provided non-investment banking securities-related services within the past 12 months.
9. WS has received compensation for products and services other than investment banking services within the past 12 months.
10. The research analyst, a member of the research analyst's household, any associate of the research analyst, or any individual directly involved in the preparation of this report has a long position in the common stocks.
11. WS or one of its affiliates beneficially own 1% or more of the common equity securities.
12. The analyst maintains Contingent Value Rights that enables him/her to receive payments of cash upon the company's meeting certain clinical and regulatory milestones.

Price Charts

Wedbush disclosure price charts are updated within the first fifteen days of each new calendar quarter per FINRA regulations. Price charts for companies initiated upon in the current quarter, and rating and target price changes occurring in the current quarter, will not be displayed until the following quarter. Additional information on recommended securities is available on request.

GBTC

1) 07/09/15
OUTPERFORM \$40



* WS changed its rating system from (Strong Buy/Buy/Hold/Sell) to (Outperform/ Neutral/Underperform) on July 14, 2009. Please access the attached hyperlink for WS' Coverage Universe: [REDACTED] research Applicable disclosure information is also available upon request by contacting Noeth Hing in the Research Department at [REDACTED] by email to [REDACTED], or the Business Conduct Department at [REDACTED]. You may also submit a written request to the following: Business Conduct Department, [REDACTED]

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[REDACTED]

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DIRECTOR OF RESEARCH

Mark D. Benson ([REDACTED])

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Dominic Ruccella

Leisure

James Hardiman, CFA CPA
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Colin Radke

Specialty Retail: Hardlines

Seth Basham, CFA
John Garrett, CFA

Specialty Retail: Softlines

Morry Brown, CFA
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RETAIL CHANNEL CHECKING GROUP

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INDUSTRIAL GROWTH TECHNOLOGY

Environmental Services / Building Products

Al Kaschalk
Misha Levental

Water and Renewable Energy Solutions

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James Kim

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Steve Koenig
Jae Cho

Entertainment: Retail

Michael Pachter
Alicia Reese
Nick McKay

Entertainment: Software

Michael Pachter
Nick McKay

Financial Technology

Gil B. Luria
Aaron Turner

Internet: Ecommerce and Payments

Gil B. Luria
Aaron Turner

Internet: Media and Gaming

Michael Pachter
Nick McKay
Alicia Reese

Internet: Social Media, Advertising and Technology

Michael Pachter
Nick McKay
Alicia Reese

Media

James Dix, CFA
Aria Ertefaie

Movies and Entertainment

Michael Pachter
Alicia Reese
Nick McKay

Semiconductors

Betsy Van Hees

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Dillip Joseph
Robert Driscoll, Ph.D.

Heather Behanna, Ph.D.

Emerging Pharmaceuticals

Liana Moussatos, Ph.D.
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Sarah James

Medical Devices

Tao Levy
Matthew Won

Medical Diagnostics and Life Sciences Tools

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