



Overall Rating

Undervalued by 188.8%

Valuation Models (in order of importance)	Analyst Consensus: \$25.00 (USD) Comparable: \$18.20 (USD) Adjusted Book Value: \$13.87 (USD)
Valuation Methods	This company is:
Cash Flow:	Fairly valued on a Cash Flow Valuation
Comparable Company:	Undervalued on a Comparable Valuation
Asset:	Undervalued on an Asset Valuation

Information

My name is Michael El-khoury, I am a Student at the University of New Brunswick, majoring in Finance and I am just starting an internship here at StockCalc for the summer. One of my tasks is to do reports on companies using StockCalc's useful tool and external resources.

This Stock is	Technically		
Fundamentally	Buy	Hold	Sell
Under Valued	Buy the Stock	Buy or Wait on Technical	Wait on Technical
Fairly Valued	Buy or Wait on Fundamental	Wait on Both Indicators for Direction	Sell or Wait on Technical
Over Valued	Wait on Fundamental	Sell or Wait on Fundamental	Sell the Stock

Company Overview (TIVO:NAS USD)	
Price	7.10
Range	7.09 - 7.19
52 week	6.69 - 14.05
Open	7.15
Vol / Avg.	448591/1.19M
Mkt cap	887.14M
P/E	0.00
Div/yield	0.72/0.09
EPS	-2.84
Shares	124.95M
Beta	0.20

Drivers of the Information Technology Sector

The information technology (IT) historically has seen the most rapid growing sector in recent years, as technology has become a bigger player in today's society. IT can be broken down to three main sub sectors; Software & Services, Technology Hardware & Equipment and Semiconductors equipment. Most tech companies revenues either come from consumer goods like, iPhone, laptops, smart watches and televisions. There has been massive increase cloud based services, such as Netflix, a subscription based streaming service. We also have some other big tech player such as Amazon, Apple and Google. Overall most of the revenue is based on either how many units sold, how many clicks or how many renewing subscriptions, which drivers are mostly focussed on consumer spending. The drivers that effect consumer spending is dominantly the health of the economic business cycle but other drivers can affect the IT sector such as outages of service impacting revenue and customer loyalty and cyber-attacks are becoming more frequent.

Recommendation

My recommendation for TiVo Co. a **HOLD**. I looked at the provided information from StockCalc, TIVO is fundamentally undervalued noted in the valuation detail section on a basis of comparable and assets deriving a \$20.88 weighted valuation. Taking a deeper look into the IT world, software forecast for TIVO, I have determine my HOLD decision due to its declining trend and lower revenues. . I suggest holding if you own it, TiVo has an opportunity to bounce back and improve their top of the line growth with their two new contracts and will also the TV streaming business demand increasing.

Company Description

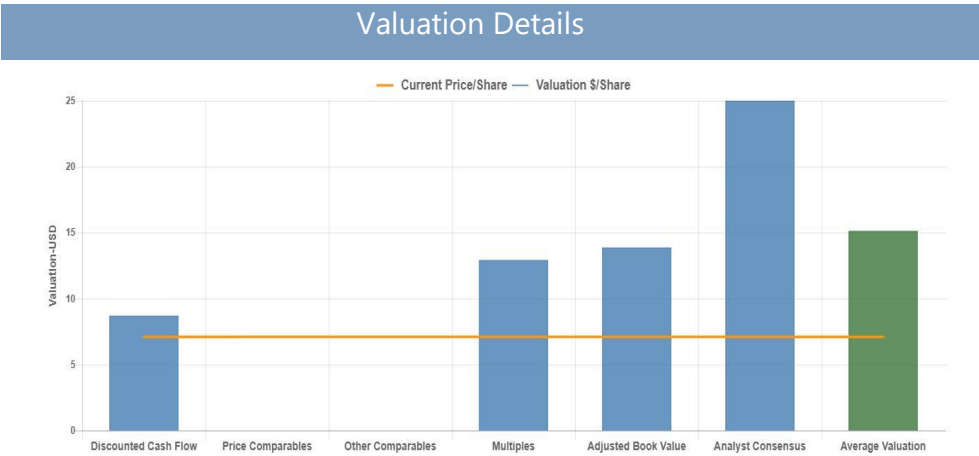
TiVo Corp is engaged in media and entertainment products. It provides a broad set of cloud-based services, embedded software solutions and intellectual property that enable people to find and enjoy online video, television programming, movies and music entertainment. In addition, it also offers advanced media and advertising solutions, including viewership data, audience insights and advertising and programming promotion optimization, which enable advanced audience targeting in linear television advertising. The group solutions are sold globally to cable, satellite, and telecommunications pay-TV service providers, virtual service providers, content and new media companies and advertisers. Geographically its presence is seen in US and other international markets.

Company Latest News

May 9<sup>st</sup>, 2019 TiVo Co. had their Q1 earning call, results showed overall decreased in their revenue streams, their product revenues fell 22% compared Q1 2018, platform solution revenue was down 26%, a big decreased of 85% for their Anti-Copy Process but their software and services improved by 8%. Adjusted EBITDA is down by 36.5% in compared to Q1 2018 due to the fact of lower revenues in Q1 2019. On July 8<sup>th</sup> and 9<sup>th</sup> TiVo extended their patent licensing agreement with Shaw Communications and also entered into multiyear a global intellectual property (IP) with LG Electronics.

TV Software Forecast

Since TiVo's prominent focus is their Software and product side that make up 58% of their revenue stream, it is notable to know the future of forecast of the software industry. TiVo's main activity is the television business, recent years we see a declining trend in cable providers customers not happy with the services anymore, and converting to streaming sites. Fortunately for TiVo, their software makes it more streamlined for customers to access what they want to watch. The global TV market is set to grow from \$1.79 billion in 2018 to \$6.61 billion by 2026. Currently TiVo has not met their recent Q1 targets and has underperformed the s&p 500 by 51.15%, due to the fact of lower revenues, but they might see a push in revenues with two big contracts with Shaw and LG, with global tv increasing and TiVo expending their intellectual property licensing, TiVo should see a bounce back for their Q2 earning and next 6-12 months too.



Discounted Cash Flow and Sensitivity Analysis for TIVO:NAS

Using a discounted cash flow model we generated an intrinsic value of \$8.70 (USD) for TIVO:NAS

Sensitivity Analysis

(showing how changes in the input variables impact the DCF calculation)

TIVO:NAS	Current Values	Valuation If Dropped *		Valuation If Raised *	
Calculated Value:	\$8.70	1%	5%	1%	5%
WACC (or Ke)	5.66	\$13.45		\$5.55	
Terminal Growth Rate	0.70	\$5.80		\$13.08	
Tax Rate	0.04	\$9.83		\$7.58	
Cash Flow	162,828,397	\$7.49		\$9.92	
Capital Expenditures	-23,372,400	\$8.55		\$8.86	
Long Term Debt	1,202,733,000	\$9.19		\$8.22	

\* Changes are absolute: ex WACC from 8% to 7%

Comparables Model

Using similar companies and price based ratios we generated a valuation of \$0.00 (USD) for TIVO:NAS. We also generated a valuation of \$0.00 (USD) using other metrics and comparables. The comparable companies were .

Company TIVO:NAS	End Date Value	Price Based on Comps	Adjustment Factor (%)
Earnings/Share	(\$2.90) (USD)	\$0.00 (USD)	0.0
Book Value/Share	\$11.67 (USD)	\$0.00 (USD)	-73.0
Sales/Share	\$5.37 (USD)	\$0.00 (USD)	12.9
Cash Flow/Share	\$1.03 (USD)	(\$8.03) (USD)	-66.8
EBITDA/Share	(\$0.98) (USD)	\$0.00 (USD)	-14.2

TIVO:NAS	Ratios Used	Average Values
----------	-------------	----------------

Multiples

Using a multiples approach we generated a valuation of \$12.92 (USD) for TIVO:NAS

Company TIVO:NAS	End Date Value	Price Based on Comps	Adjustment Factor
Earnings/Share	(\$2.90) (USD)	\$0.00 (USD)	0
Book Value/Share	\$11.67 (USD)	\$13.57 (USD)	0
Sales/Share	\$5.37 (USD)	\$13.45 (USD)	0
Cash Flow/Share	\$1.03 (USD)	\$11.74 (USD)	0
EBITDA/Share	(\$0.98) (USD)	\$0.00 (USD)	0

Ratios	Ratio Average
PE Ratio	54.17
PB Ratio	1.16
PS Ratio	2.50
PCF Ratio	11.41
EV to EBITDA	14.98

Adjusted Book Value versus Historical Price to Book

The average the Price to Book ratio for TIVO:NAS for the last 10 years was 1.18. We ran the Adjusted Book Value for TIVO:NAS and generated a book value of \$11.76 (USD). By multiplying these we get an adjusted valuation of \$13.87 (USD)

Analyst Data

In the Stockcalc database there are 1 analysts that provide a valuation for TIVO:NAS. The 1 analysts have a consensus valuation for TIVO:NAS for 2019 of \$25.00 (USD).

Analyst Recommendation					
Buy	Hold	Sell	Rating (of 5)	Guidance	As Of
0	0	0			2019-7-3

Current Price: 7.1 USD

Analyst Consensus	
USD Millions	2019
Mean EPS	-0.63
# EPS Analysts	1
Mean Revenue	650.00
# Revenue Analysts	1
Mean Target Price	25.00
Mean Cash Flow	
Mean EBITDA	119.20
Mean Net Income	-86.10
Mean Debt Outstanding	
Mean Tax Rate	
Mean Growth Rate	
Mean Capital Expenditure	

## Explanation of Valuation Models

We have up to 6 valuation points for each company in the database.

The Discounted Cash Flow (DCF) valuation is a cash flow model where cash flow projections are discounted back to the present to calculate value per share. DCF is a common valuation technique especially for companies undergoing irregular cash flows such as resource companies (mining, forestry, oil and gas) going through price cycles or smaller companies about to generate cash flow (junior exploration companies, junior pharma, technology firms...).

The Price Comparables valuation is the result of valuing the company we are looking at on the basis of ratios from selected comparable companies: Price to Earnings, Price to Book, Price to Sales, Price to Cash Flow, Enterprise Value (EV) to EBITDA. Each of these ratios for the selected comparable companies are averaged and multiplied by the values for the company we are interested in to calculate a value per share for our selected company.

We have included the Other Comparables as a way to value companies that cannot be valued using Earnings based ratios. This technique is very useful for companies still experiencing negative cash flows such as mining exploration firms. We use Cash/Share, Book Value/Share, MarketCap, 1 Year Return, NetPPE as the ratios here. Each of these ratios for the selected comparable companies are averaged and multiplied by the values for the company we are interested in to calculate a value per share for our selected company.

Multiples are similar to Price comparables where we look at current or historic ratios for the company in question to assess what it should be worth today based on those historic ratios. We use the same 5 ratios as in the price comparables and value the company with its historic averages.

With Adjusted Book Value (ABV) we calculate the book value per share for the company based on its balance sheet and multiply that book value per share by its historical price to book ratio to calculate a value per share.

If we have Analyst coverage for the company we use the consensus target price here.

## Notice to User

*This Report was generated using the tools available on [StockCalc.com](https://stockcalc.com). Patchell Brook Equity Analytics Inc. emphasizes that the user assumes all risks associated with the use of this report or the Stockcalc website including, but not limited to, all terms and conditions mentioned in the legal [disclaimer](#).*

*The contents of this report and the Stockcalc website are provided on an "as is" or "as available" basis with all faults and may not be current in all cases. The information in this report or on the website is subject to continuous change and Patchell Brook Equity Analytics Inc. assumes no responsibility to update or amend such information or that the information will be current. Patchell Brook Equity Analytics Inc. does not claim that all information, calculations or opinions presented in this report or on its website are true, reliable, or complete. Accordingly, you should not rely on any of the information as authoritative or as a substitute for the exercise of your own skill and judgment in making an investment or other decision. Any information, data, opinions, calculations or recommendations provided by third parties through links to other websites or otherwise made available through this report or website are solely those of the third party and not of Patchell Brook Equity Analytics Inc. Please refer to the Terms of Use on [stockcalc.com](https://stockcalc.com) for further information. To access all of the tools on Stockcalc, including more detailed valuation reports and the models used to generate these valuations, please subscribe for a free 30 day trial of Stockcalc [here](#).*