

FORRESTER®

# The Total Economic Impact™ Of Accepting Bitcoin Using BitPay

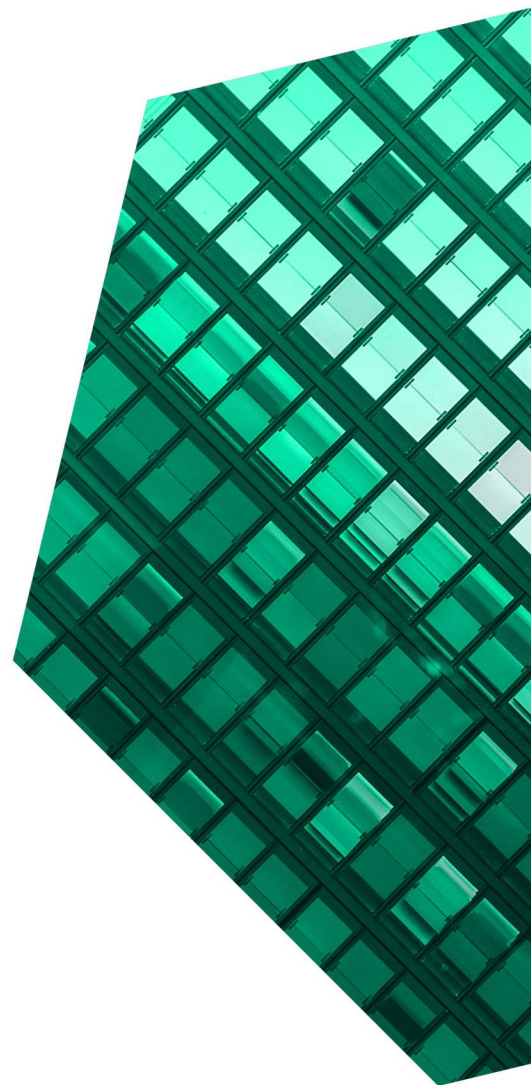
Cost Savings And Business Benefits Enabled By Accepting Bitcoin And Other Cryptocurrencies Using BitPay

JULY 2020

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## ABOUT FORRESTER CONSULTING

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## Executive Summary

BitPay is a bitcoin and blockchain payment processing company with business solutions that eliminate transaction fraud, reduce the cost of payment processing, and enable borderless payments in cryptocurrency. Consumers trust BitPay to buy goods and services safely, securely, and conveniently. Merchants rely on BitPay to attract a high-value global market to capture new, larger, and recurring sales. BitPay shields the merchant from the market risks associated with cryptocurrency conversion and deposits fiat funds in the merchant's account the next business day.

BitPay commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) merchants may realize using [BitPay](#) to enable their consumers to pay using cryptocurrency.<sup>1</sup> The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of accepting cryptocurrency payments using BitPay.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed representatives of four merchants that have enabled cryptocurrency payment services with BitPay, and have marketed those options through their own channels and co-marketing with BitPay. While adoption of cryptocurrencies like bitcoin is still emerging, these merchants have captured significant benefits at relatively low risk and cost, including:

- **Generating new sales** by attracting first-time buyers who prefer paying with bitcoin or other cryptocurrencies.
- **Increasing the size of transactions** because buyers who pay with cryptocurrency tend to spend more than other customers.
- **Paying lower transaction costs** since BitPay transaction fees are lower than those for other payment types.
- **Reducing risk** by greatly lessening or eliminating issues related to fraud or mistakes.

### KEY STATISTICS



Return on investment (ROI)

**327%**



Net present value (NPV)

**\$1.4 million**

Prior to using cryptocurrency payment services, these merchants did not invest any extra funds to targeted marketing or advertising to cryptocurrency users, but they were missing out on larger incremental sales, and paying lower fees.

**“BitPay is one of the payment partners we look to [in order to] help us to reach a very unique target audience.”**

*eCommerce technology director,  
computer and electronics retailer*

## KEY FINDINGS

**Quantified benefits.** The following three-year, risk-adjusted present value (PV) benefits are based on the experiences of the interviewed merchants and representative of a composite merchant with \$350 million in annual revenue. The benefits include:

- **Incremental sales from new customers.** Accepting bitcoin and other cryptocurrencies can attract new customers and lead to more sales. Many customers who pay with bitcoin or other cryptocurrencies through BitPay are new to the merchant and would not have purchased otherwise. Customers who use cryptocurrency also spend about \$450 more per transaction on average, much higher than what the average customer spends. For the composite merchant, Forrester applied a 10% operating margin rate, adding up to net-new eCommerce operating margin of nearly \$483,000 PV over the three-year analysis period.
- **Higher average order values (AOVs).** Cryptocurrency adopters tend to spend more than other customers, and not just when the bitcoin market is up. With the ability to use cryptocurrency funds, these customers are willing to spend even more, more than double the average customer. Cryptocurrency users have an AOV of \$450, compared to the average AOV of about \$200 for non-cryptocurrency users. Using the 10% operating margin rate, the benefit of higher cryptocurrency AOVs adds up to a PV of more than \$849,000 over three years.

**“The transaction cost for any traditional payment type is more than double [compared to] BitPay.”**

*CEO, online gift card marketplace*

**“Unlike with card payments, we have zero chargeback risk.”**

*Product manager, domain name registrar and website hosting service*

- **Lower fees.** The composite merchant avoids credit card and other payment services transaction costs of 2.25%. BitPay charges a 1% fee on purchases made with cryptocurrencies, while other services charge 2% or more. The composite merchant avoids 2.25% in transaction fees (based on primarily US rates) for every transaction completed using BitPay. Note that Forrester did not include BitPay’s 1% transaction fee here, but it is covered in the Costs section below, and it results in a net transaction cost savings of 1.25%. This adds up to a three-year PV of more than \$363,000 in avoided transaction fees.

**No chargeback costs.** For the composite merchant, an estimated \$3 million to \$3.8 million would be at risk of chargebacks each year due to payment mistakes or fraud. This equates to about 1% of the merchant’s total sales. The merchant nearly avoids this now since it processes its sales volume with BitPay. At an estimated 1% of sales at risk of chargebacks unrelated to customer service, this adds up to a three-year PV of more than \$72,000.

**Unquantified benefits.** The interviewed merchants experienced the following benefits, which are not quantified for this study:

- **Increased customer satisfaction and lifetime value.** For this study, Forrester analyzed individual transactions of new and repeat customers. New sales and larger transaction sizes from shoppers paying in cryptocurrency and using BitPay can also lead to higher

customer lifetime value. These customers will have a better shopping experience when they can use their preferred cryptocurrency (at no impact to other customers) and they also may buy more in the future.

- **Peace of mind.** BitPay helps merchants avoid costly chargeback costs, reduce transaction fees, and eliminate perceived cryptocurrency risks and stigmas. It assumes any risk of cryptocurrency volatility by converting bitcoin or other cryptocurrencies first, then paying the merchant in its preferred currency. Any differences resulting from the change in price of bitcoin or other cryptocurrencies are borne by BitPay. Also, BitPay performs compliance reviews of all merchants before allowing them to use the service (and periodically monitors them), and it runs a risk-based transaction monitoring program to ensure compliance with government rules and regulations. Merchants have assurances that cryptocurrency transactions are from known customers and legitimate sources, and consumers can be comfortable buying from a reputable merchant.
- **COVID-19 response.** Planning for a major event like the coronavirus pandemic is obviously difficult, and any preparations will likely not be complete. But merchants reported an increase in online shopping during the pandemic, and in a 2020 Forrester survey, 11% of consumer respondents said they used a digital payment method for the first time.<sup>2</sup> BitPay allowed merchants to serve and support cryptocurrency adopters better and to provide all customers added options while shopping.

**Costs.** Risk-adjusted PV costs include:

- **BitPay transaction fees.** BitPay charges a flat 1% fee on sales volume for cryptocurrency payments. For the composite merchant, this adds up to a PV of less than \$224,000 during the three-year period. Also note that this fee is 1%

**“It’s a great relationship because BitPay was able to help us educate an entirely new community of people about our services.”**

*Marketing director, gold and precious metals broker*

instead of the average transaction fee of 2.25% for credit cards and other payments. While included in the Costs section, this transaction fee category adds up to a net cost savings of 1.25% of cryptocurrency sales volume. Even if Forrester removed all sales benefits from the analysis, the investment would still provide a net return through transaction and chargeback cost savings.

- **Increased marketing and advertising costs.** Merchants offering BitPay can see an increase in sales volume by attracting a new market of cryptocurrency adopters. While the composite merchant shares some marketing and advertising with BitPay (such as through the BitPay app), it needs to pay for some incremental marketing and advertising resources, adding up to a PV of less than \$190,000.

Forrester’s interviews with representatives from four existing merchants and subsequent financial analysis found that the composite merchant would experience benefits of nearly \$1.8 million over three years versus costs of a little over \$413,000, adding up to a net present value (NPV) of \$1.4 million and an ROI of 327%.



ROI  
**327%**

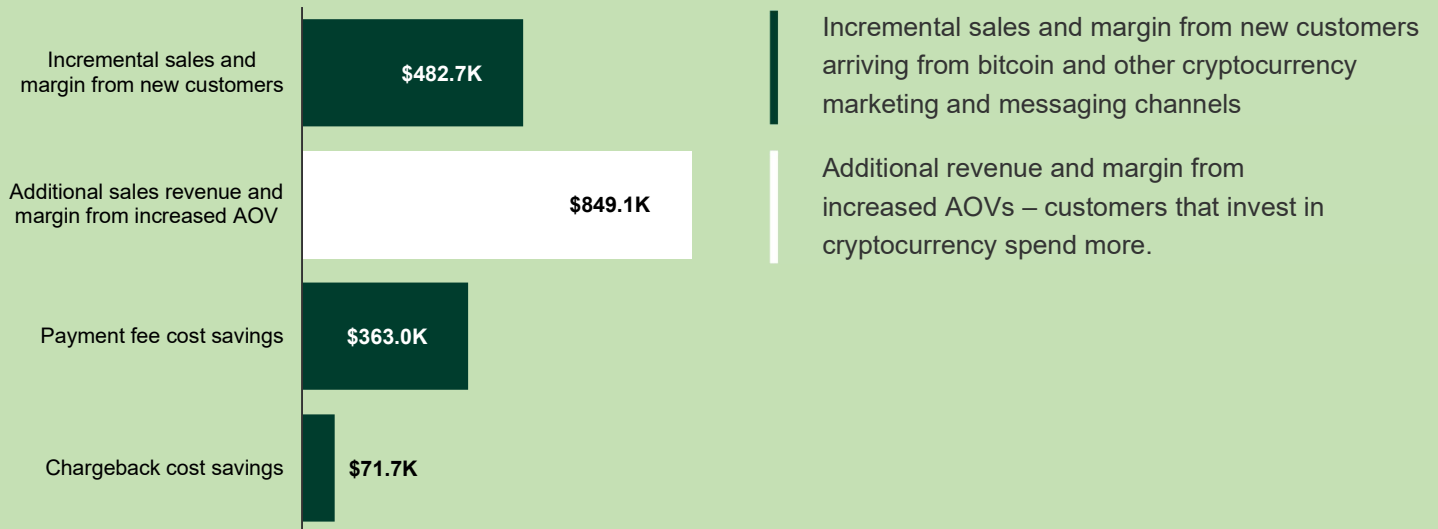


BENEFITS PV  
**\$1.8 million**



NPV  
**\$1.4 million**

### Total Benefits (Three-Year)



“ BitPay allows us to reach a unique and global buying audience.”

— Product manager, domain name registrar and website hosting service

## TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for merchants considering accepting bitcoin and other cryptocurrencies using BitPay.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that BitPay can have on an organization.

### DISCLOSURES

Readers should be aware of the following:

This study is commissioned by BitPay and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in BitPay services.

BitPay reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

BitPay provided the customer names for the interviews but did not participate in the interviews.



### DUE DILIGENCE

Interviewed BitPay stakeholders and Forrester analysts to gather data relative to accepting bitcoin and other cryptocurrencies.



### CUSTOMER INTERVIEWS

Interviewed four decision-makers at organizations accepting bitcoin and other cryptocurrencies with BitPay to obtain data with respect to costs, benefits, and risks.



### COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewed organizations.



### FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.



### CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

# The BitPay Cryptocurrency Payment Services Merchant Journey

■ Drivers leading to accepting bitcoin and other cryptocurrencies using BitPay

Interviewed organizations			
Retail Focus	Interviewee	eCommerce and BitPay volume	Average AOV versus BitPay
Gold and precious metals broker	Marketing director	\$750 million total \$10 million to \$15 million crypto	\$1,500 versus \$4,500
Online gift card marketplace	CEO and CFO	\$5 million to \$7 million crypto	\$75 versus \$232
Domain name registrar and website hosting service	Product manager	\$100 million total \$4 million to \$5 million crypto	\$17 versus \$42
Computer and electronics retailer	eCommerce technology director and payments manager	\$1.2 billion total \$3 million to \$5 million crypto	\$400 versus \$585

For this study, Forrester conducted interviews with representatives from four merchants that accept bitcoin and other cryptocurrencies using BitPay. They reported total eCommerce sales of between \$100 million and \$1.2 billion, and the share of bitcoin and other cryptocurrency payments using BitPay is between 0.5% to 6.5% of total eCommerce sales. For some merchants, a specific product line's share of total sales is even higher, reaching 10% or more at times. AOVs for cryptocurrency sales are between one-half and triple the average for all sales.

## OPPORTUNITIES

The interviewed merchants identified an opportunity to grow sales by reaching a new customer segment that prefers to pay with bitcoin and other cryptocurrencies when shopping online. While

cryptocurrency buyers still represent a relatively small share of spending, cryptocurrency recognition is significant and growing. In a 2019 Forrester survey of adult online shoppers, 21% of respondents recognized bitcoin much more than several other payment processing and credit services used on eCommerce sites.<sup>3</sup>

There is also an increase in cryptocurrency adoption and use. According to a 2018 Forrester survey, a 2% overall share of consumers used bitcoin for a digital payment in the previous three months.<sup>4</sup> For those younger than 30 years old, the share was higher at 3%. According to the 2020 update to this survey these numbers have increased, with a 3% share of all consumers reported using bitcoin in the previous three months, and the under-30 group now at 4%.<sup>5</sup>

## Consumers who have used bitcoin, 2018



## Consumers who have used bitcoin, 2020





As eCommerce, bitcoin, and other cryptocurrency usage grows, the number of total cryptocurrency users should also grow at an even greater rate. With BitPay, merchants can expect:

- **No cryptocurrency risk.** Using BitPay, a merchant is protected from cryptocurrency volatility. BitPay accepts the cryptocurrency transaction on behalf of the merchant and settles in its preferred currency (USD, Euro, etc.). In addition, BitPay performs required regulatory compliance checks to ensure the customer and transactions are valid.
- **Low barrier to entry.** BitPay charges a flat fee on the purchase amounts paid with bitcoin or other cryptocurrencies. It requires some effort to adopt and market BitPay, but total up-front investment is relatively low, and the benefits outweigh the costs. The Marketing director at the gold and precious metals broker said: “More than anything, we try to make things very convenient to our customers. Everything that we do is with a goal of being simple and easy to use.”

### COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite merchant, and an associated ROI analysis that illustrates the financial impact of investing in BitPay services and offering cryptocurrency payments. The composite merchant is representative of the four eCommerce merchants that Forrester interviewed, and it is used to present the aggregate financial analysis in the next section. Based on the interviews, the composite organization is a retail merchant that sells technology products and services online with \$350 million in annual

**“I would almost go as far as to say it’s zero fraud.”**

*CEO, gift card marketplace*

**“More than anything, we try to make things very convenient to our customers. Everything that we do is with a goal of being simple and easy to use.”**

*Marketing director, gold and precious metals broker*

eCommerce sales. It estimates that in the latest year, BitPay transacted \$8 million in eCommerce volume, or about 2.3% of total eCommerce sales.

The average order size of a typical eCommerce transaction is about \$200 for traditional payment methods and \$450 for cryptocurrency payments.

Of the customers paying via BitPay, about 60% are returning customers and 40% are new customers. The merchant estimates that its average transaction fee for credit card and other payment services is 2.25%, and that chargebacks add up to about 1% of total eCommerce sales volume.

### Key assumptions

- **\$8 million BitPay volume (2.3% of total ecommerce sales)**
- **\$200 average non-crypto AOV**
- **\$450 AOV with BitPay**
- **2.25% average payment fees**
- **1% average chargebacks**

# Analysis Of Benefits

■ Quantified benefit data as applied to the composite

Total benefits						
Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Incremental sales and margin from new customers	\$173,016	\$194,643	\$218,984	\$586,643	\$482,675
Btr	Additional sales revenue and margin from increased AOV	\$304,380	\$342,428	\$385,223	\$1,032,030	\$849,130
Ctr	Payment fee cost savings	\$130,131	\$146,398	\$164,673	\$441,202	\$363,012
Dtr	Chargeback cost savings	\$25,703	\$28,916	\$32,530	\$87,149	\$71,704
	<b>Total benefits (risk-adjusted)</b>	<b>\$633,230</b>	<b>\$712,384</b>	<b>\$801,409</b>	<b>\$2,147,024</b>	<b>\$1,766,521</b>

## INCREMENTAL SALES AND MARGIN FROM NEW CUSTOMERS

The interviewed merchants said they see new sales due to BitPay. They stated that a significant percentage of new customers pay with bitcoin or other cryptocurrencies using BitPay at checkout, and it is presumed that many of those customers would not have found the retailer or decided to buy from it without knowing they had the option to spend their cryptocurrency. Merchant marketing and advertising efforts highlighting bitcoin or other cryptocurrency payment options (as well as co-marketing from BitPay through its app and other channels) brought those new customers to the merchants. In addition, the interviewed merchants said they see that shoppers using cryptocurrencies contribute to a higher AOV than customers using traditional payment options.

**Evidence and data.** The merchants found that many of these new customers were looking for online retailers that would accept bitcoin or other cryptocurrencies. The merchants are able to offer bitcoin or other cryptocurrency payments using BitPay as a differentiator, increasing customer sales by catering to this unique market. For example, merchants reported new sales growth as a result of:

- **Access to new customers.** The marketing director for the gold and precious metals broker said, “Wherever we put BitPay on our site, we are sending a strong signal that we are also believers, and we can serve this community better.” The marketing director also said their organization has been experimenting with new products and services that will even better serve consumers who prefer to pay with bitcoin or other cryptocurrencies. “We’ve tested distributed ledger technology (DLT) for payments, and we knew that our cryptocurrency community would be better educated and understand the value of that concept.”
- **Access to a global audience.** The product manager at the domain name registrar and

**“Wherever we put BitPay on our site, we are sending a strong signal that we are also believers, and we can serve this community better.”**

*Marketing director, gold and precious metals broker*

Incremental sales and margin from new customers					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Transactions processed by BitPay	Composite	17,800	20,025	22,528
A2	Percentage that is new customers	Composite	40%	40%	40%
A3	Share of new customers that would have purchased with other payment options	Composite	40%	40%	40%
A4	Total new transactions enabled by cryptocurrency payments using BitPay	$A1 * A2 * (1 - A3)$	4,272	4,806	5,407
A5	Cryptocurrency AOV	Composite	\$450	\$450	\$450
A6	Operating margin	Composite	10%	10%	10%
A <sub>t</sub>	Incremental sales and margin from new customers	$A4 * A5 * A6$	\$192,240	\$216,270	\$243,315
	Risk adjustment	↓10%			
<b>A<sub>tr</sub></b>	<b>Incremental sales and margin from new customers (risk-adjusted)</b>		<b>\$173,016</b>	<b>\$194,643</b>	<b>\$218,984</b>
<b>Three-year present value: \$483,000</b>					

website hosting service highlighted another aspect. They said: “BitPay allows us to reach a unique and global buying audience.”

- **Access to customers preferring to spend cryptocurrency, such as bitcoin.** The CEO at the online gift card marketplace said, “I think that the majority of bitcoin customers have come to us because they have bitcoin and went looking for a place to spend it.”

**Modeling and assumptions.** For the composite merchant, Forrester assumes that:

- Based on the experience of interviewed customers, the number of BitPay transactions grows by 12.5% each year.

- New customers make 40% of those transactions.
- Of these new customers, 40% would have otherwise used non-cryptocurrency payment methods during checkout.
- The AOV for a transaction using bitcoin or other cryptocurrencies as payment is \$450.
- The average operating margin on the composite merchant’s eCommerce sales is 10%.

**Risks.** Incremental customer sales volume may vary due to factors such as the percentage of new customers and the share of customers that would have paid using traditional, non-cryptocurrency methods.


**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk adjusted total PV of nearly \$483,000.

**ADDITIONAL SALES AND MARGIN FROM HIGHER AVERAGE ORDER VALUES (AOV)**

**Evidence and data.** All interviewed merchants stated that purchases with bitcoin or other cryptocurrencies

Shoppers using bitcoin or other cryptocurrencies

**4,000 new sales**



Additional sales and margin from increased AOV					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	BitPay transactions	A1	17,800	20,025	22,528
B2	Percentage made by existing customers	1-A2	60%	60%	60%
B3	Total transactions processed by BitPay for existing customers	B1*B2	10,680	12,015	13,517
B4	Transactions from new customers that would have used a different payment option (rounded value shown)	A1*A2*A3	2,848	3,204	3,604
B5	Total BitPay transactions with higher-than-expected AOV	B3+B4	13,528	15,219	17,121
B6	AOV for transactions using cryptocurrency	A5	\$450	\$450	\$450
B7	Average AOV	Composite	\$200	\$200	\$200
B8	Operating margin	A6	10%	10%	10%
Bt	Additional sales and margin from increased AOV	B5*(B6-B7)*B8	\$338,200	\$380,475	\$428,025
	Risk adjustment	↓10%			
<b>Btr</b>	<b>Additional sales and margin from increased AOV (risk-adjusted)</b>		<b>\$304,380</b>	<b>\$342,428</b>	<b>\$385,223</b>
<b>Three-year present value: \$849,000</b>					

using BitPay had higher AOVs than transactions involving traditional payment methods. The merchants saw that customers paying with bitcoin or other cryptocurrencies spent anywhere from one-third more to three times the average transaction size compared to what customers using traditional payment methods spent.

The product manager at the domain name registrar and website hosting service underscored the value of

**“BitPay helps us attract a large and valuable segment of customers who want to use their bitcoin.”**

*Product manager, domain name registrar and website hosting service*

having BitPay as a payment option, and said, “BitPay helps us attract a large and valuable segment of customers who want to use their bitcoin.” These customers are willing to spend more on their transactions, increasing the overall AOV and the organization’s total sales.

In certain cases, a merchant’s industry and target customer aligns well with the cryptocurrency market, which can further amplify the positive impact on AOV that BitPay offers. In the case of the computer and electronics retailer, the payments manager said: “Many people who use BitPay have different customer behaviors. For example, if they want to mine their own cryptocurrency, then they are more likely to buy several items from us at once — like video cards, memory, motherboards, or SSD drives. So, of course, these types of orders will be of higher order value.”

**Modeling and assumptions.** For the composite merchant, Forrester assumes that:

- The AOV for a transaction using cryptocurrency as payment is \$450.
- The number of transactions paid with bitcoin or other cryptocurrencies using BitPay grow by 12.5% each year.
- Existing customers (those not included in the previous new customer benefit) make 40% of the transactions.



Average AOV for buyers using cryptocurrencies  
**More than 2x**

- Of the total new customers from the previous benefit, 40% would have become a new customer through other methods and would have used another non-cryptocurrency payment method during checkout.
- In other words, all customer transactions paid with cryptocurrency using BitPay except for the 4,272 net new transaction identified in the previous benefit are counted here.
- For all the customers who would have used a different payment method, the AOV for those transactions would have been estimated at \$200.
- The average operating margin on eCommerce products is 10%.

**Risks.** The increase in AOV may vary due to factors such as:

- The percentage of existing customers.
- Operating margin.
- The share of customers who would have paid using traditional, non-cryptocurrency methods.

Also, it is likely that a customer who invests in cryptocurrency has a higher AOV than the average customer.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk adjusted total PV of more than \$849,000.

### PAYMENT FEE COST SAVINGS

**Evidence and data.** Every online transaction type requires some help for payment processing, and those services come with a fee. Credit card, online payment, online credit, and other services typically charge fees between 1.5% and 4% of sales volume. For the composite merchant, which accepts major credit cards and a few other online payment services, fees average about 2.25% of sales. So, for a \$100 purchase by a customer, the payment processor would charge the merchant \$2.25.

**“With BitPay, the advantage is that the cost is cheaper than with credit cards.**

*eCommerce technology director,  
computer and electronics retailer*

But BitPay leverages cryptocurrency blockchain processes and other efficiencies, so it charges just 1% of eCommerce sales volume. For the same \$100 purchase, BitPay would charge the merchant \$1, meaning the merchant saves \$1.25 on one transaction. Over many transactions, that can add up to a significant amount. The eCommerce technology director for the computer and electronics retailer said, “With BitPay, the advantage is that the cost is cheaper than with credit cards.”

**Modeling and assumptions.** This section explains how the modeling is done.

Payment fee cost savings					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Sales volume of cryptocurrency transactions using BitPay (minus net-new customers) (rounded value shown)	B5*B6	\$6,088,000	\$6,849,000	\$7,704,000
C2	Average payment processing fee for all payment types	Composite	2.25%	2.25%	2.25%
Ct	Payment fee cost savings (rounded value shown)	C1*C2	\$136,980	\$154,103	\$173,340
	Risk adjustment	↓5%			
Ctr	Payment fee cost savings (risk-adjusted)		\$130,131	\$146,398	\$164,673
<b>Three-year present value: \$363,000</b>					

- The annual volume of transactions paid with bitcoin or other cryptocurrencies using BitPay totals \$8 million to \$10 million.
- Revenue from net-new customers (from the first benefit) is subtracted here since it is assumed they would not have made an alternative credit card transaction.

savings of 2.25% of sales volume processed through BitPay.

**Results.** The total benefit adds up to a three-year PV of \$401,000. The net benefits of reduced payment fees (including transaction costs) are a three-year, risk-adjusted NPV of nearly more than \$363,000.

**CHARGEBACK COST SAVINGS**

**Evidence and data.** Online retailers deal with credit card fraud or fraud-related chargebacks. The standard operating procedure for accepting card-not-present transactions is to do everything possible to ensure the purchaser is in fact the cardholder and not a fraudster. Completed and approved transactions initiate quick fulfillment and shipping, so goods could be already out the door by the time the merchant suspects fraud or realizes the transaction occurred



Average Processing fee: 2.25% of sales

Processing fee for BitPay: 1% of sales

- For the interviewed organizations, the average non-cryptocurrency payment processing fee is about 2.25% of transaction amounts, based primarily on US sales.<sup>6</sup>

**Risks.** To allow for variances in credit card and other fees (and the average fee a merchant might measure), a 5% risk adjustment has been applied.

Note that this benefit accounts for the full alternative payment avoided cost. It does not include the 1% BitPay transaction fee, which is accounted for in the Costs section. This benefit accounts for the full

**“Unlike card payments, bitcoin payments have zero chargeback risk.**

*Product manager, domain name registrar and website hosting service*

Chargeback cost savings					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	BitPay transactions (minus net-new customers)	B5	13,528	15,219	17,121
D2	AOV for transactions from customers who prefer cryptocurrency but have to use an alternative	B7	\$200	\$200	\$200
D3	Total estimated volume of avoided fraud risk	D1*D2	\$2,705,600	\$3,043,800	\$3,424,200
D4	Chargeback rate related to fraud	Composite	1%	1%	1%
Dt	Chargeback cost savings	D3*D4	\$27,056	\$30,438	\$34,242
	Risk adjustment	↓5%			
Dtr	Chargeback cost savings (risk-adjusted)		\$25,703	\$28,916	\$32,530
<b>Three-year present value: \$72,000</b>					

with a stolen card. This can lead to added merchant costs.

Cryptocurrency works more like cash. It's a "push" payment, which means the consumer transfers good funds at the time of purchase as if they handed over cash at the register. BitPay processes a payment immediately, converts the cryptocurrency to funds in a merchant's preferred currency, and deposits the funds to the merchant the next business day.



**Avoided chargebacks on BitPay transactions:**  
**1% of crypto sales**

Merchants don't need to be concerned with fraud from stolen credit cards or account takeover, as they don't exist with cryptocurrency payments. "Unlike card payments, bitcoin payments have zero chargeback risk," said the product manager for the domain name registrar and website hosting service. The CEO of the gift card marketplace added, "Accepting cryptocurrencies is comparatively low-

maintenance [compared to other payment types] from a fraud standpoint."

Interviewed merchants identified a number of payment-related chargebacks, estimated to be 1% of total sales volume. Note that the 1% chargeback rate used here is a portion of the larger chargeback rate these merchants track, which includes other issues unrelated to payments that might lead to a replacement, return, or write-off.

**Modeling and assumptions.** For the composite merchant, Forrester assumes:

- There is a 1% chargeback rate on sales from payment-related issues.
- Bitcoin or other cryptocurrencies purchases using BitPay have a payment-related chargeback rate of nearly 0%.
- Since these transactions would not involve cryptocurrency, the general AOV of \$200 is used.
- As described in the new sales benefit, there are customers who decided to shop with the merchant because they can spend their cryptocurrency using BitPay. Only those customers who would have used an alternative

payment are included here. In Year 1, that's estimated to include 14,952 transactions.

**Risks.** As chargeback rates can vary greatly across merchants (as well as chargebacks attributable to payment methods), Forrester applied a 5% risk adjustment.

**Results.** Risk-adjusted benefits add up to a three-year PV of nearly \$72,000.

**“The reason why BitPay is such a great partner is that we knew it took out all of the risks associated with accepting cryptocurrencies.**

*Marketing director, gold and precious metals broker*

### UNQUANTIFIED BENEFITS

The interviewed merchants identified some additional benefits that were not quantified because they aren't financially measurable or are difficult to attribute.

These benefits include:

- **Increased customer satisfaction and lifetime value.** Individual transactions are analyzed, but

data on the frequency of returning customers for bitcoin or other cryptocurrency transactions using BitPay compared to all other transactions is not available. Readers may be able to apply their own customer lifetime values to their business case assessments and consider that cryptocurrency shoppers not only would likely need to make future purchases, but also that their AOVs are typically larger. And as many of these customers prefer to use cryptocurrency, they may have a better shopping experience, which could lead them to make more purchases or buy more in the future.

- **No currency volatility.** BitPay converts bitcoin or other cryptocurrencies into the merchant's preferred currency, then pays the merchant in that currency. BitPay assumes the risk as it processes the cryptocurrency payment, disbursing funds to the merchant. The marketing director for the gold and precious metals broker said, “The reason why BitPay is such a great partner is that we knew it took out all of the risks associated with accepting cryptocurrencies.”
- **Reduce perceived risks and stigmas.** BitPay reviews all merchants before approving them to join the BitPay network and continues periodic

## Business In The Era Of COVID-19

Planning for a major event like the coronavirus pandemic is obviously difficult or impossible, and any preparations will likely not be complete. However, one segment of merchants has reported some growth: There's been an increase in online shopping. In Forrester Analytics' “Consumer Technographics® Benchmark Survey, Part 1, 2020,” 11% of consumer respondents reported they used a digital payment method for the first time.

BitPay has allowed merchants to serve their customers better by catering to cryptocurrency adopters more directly and by providing all customers who might consider spending their cryptocurrency with added options, and offering all this at little or no impact to all other customers. BitPay is an added payment option, and it doesn't affect other payment choices or their use.

The technology director at the computer and electronics retailer said: “Today, with everyone stuck at home social distancing, we foresee more and more customers will have the means and want to buy their products using cryptocurrency. Especially in our industry, we serve a target audience that aligns with cryptocurrency community very well.”



reviews so consumers can be comfortable buying from a reputable merchant. It also has a risk-based consumer transaction monitoring system, especially for larger payments, so merchants know that cryptocurrency transactions are valid and from legitimate sources.

- **COVID-19 response.** BitPay has been a resource helping some merchants better manage the new world of business. See the sidebar on the previous page.

## FLEXIBILITY

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so. The value of flexibility is clearly unique to each customer, and the measure of its value varies. There are multiple scenarios in which a merchant might choose to implement cryptocurrency payment services and later expand marketing investment or add cryptocurrency payments to other channels.

More customers buying with cryptocurrency means reduced payment processing costs and reduced chargeback risk. Educating customers about cryptocurrencies and focusing marketing (and co-marketing with BitPay) investments can help increase the amount of bitcoin and other cryptocurrency purchases using BitPay, by encouraging existing customers to convert their preferred method of payment which saves costs and adds new customers.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in [Appendix A](#)).

# Analysis Of Costs

■ Quantified cost data as applied to the composite

Total costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Etr	BitPay transaction fees	\$0	\$80,100	\$90,113	\$101,377	\$271,589	\$223,457
Ftr	Marketing and advertising costs	\$21,000	\$63,000	\$68,250	\$73,500	\$225,750	\$189,899
	Total costs (risk-adjusted)	\$21,000	\$143,100	\$158,363	\$174,877	\$497,339	\$413,356

## BITPAY TRANSACTION FEES

**Evidence and data.** A transaction fee is required when shoppers to spend bitcoin and other cryptocurrencies on a merchant’s site. BitPay charges a 1% transaction fee on the purchase amount for payments using bitcoin or other cryptocurrencies that it processes.

**Modeling and assumptions.** For the composite merchant, Forrester estimates about \$8 million in total cryptocurrencies purchases using cryptocurrencies in Year 1, \$9 million in Year 2, and \$10.1 million in Year 3. A 1% transaction fee adds up to an annual cost of \$80,100 in Year 1, \$90,113 in Year 2, and \$101,377 in Year 3.

**Risks.** Since the transaction fee is a fixed rate, no risk adjustment is applied. The three-year PV of transaction fees is just over \$101,000.

**Results.** Note that this cost is associated with the 2.25% average transaction fee for other payment types, which is accounted for in the Benefits section. The net benefits of reduced payment fees are a three-year, risk-adjusted NPV of less than \$223,000.

## MARKETING AND ADVERTISING COSTS

**Evidence and data.** While reduction in transaction costs and avoided chargeback savings come with any consumer who pays with bitcoin or other cryptocurrencies using BitPay, merchants need to invest in marketing and advertising to educate, inform, and encourage shoppers:

- With information and encouragement, merchants can inform new markets that they can buy products and services with cryptocurrency and encourage existing customers to switch from traditional payment methods.
- With education, more consumers can learn about cryptocurrencies and feel more comfortable using them for retail purchases.

**Modeling and assumptions.** For the composite merchant, Forrester assumes it makes an up-front marketing and advertising investment of \$20,000 to prepare for bitcoin and other cryptocurrency payment acceptance using BitPay.

For the composite organization, annual marketing and advertising costs related to cryptocurrency payment options are estimated at: \$60,000 in Year 1, \$65,000 in Year 2, and \$70,000 in Year 3.

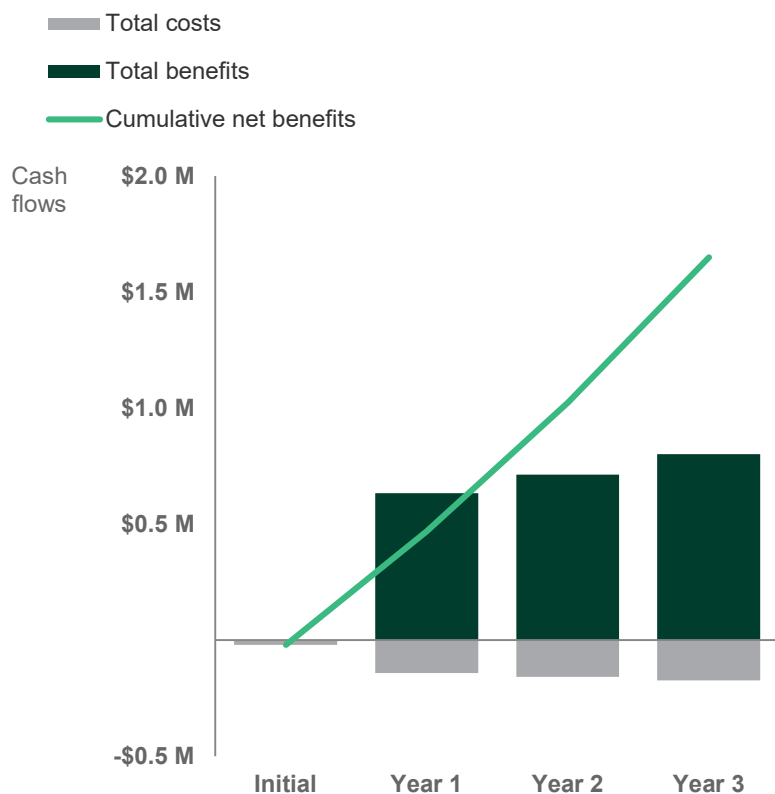
These estimates account for BitPay co-marketing. BitPay provides several avenues for marketing, including merchant highlights and notifications from within the BitPay mobile app.

**Risks.** As marketing and advertising strategies vary across merchants, Forrester adjusted this cost upward by 5%.

**Results.** The three-year risk-adjusted marketing costs add up to a PV of less than \$190,000.

# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

**These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.**

### Cash flow analysis (risk-adjusted estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$21,000)	(\$143,100)	(\$158,363)	(\$174,877)	(\$497,339)	<b>(\$413,356)</b>
Total benefits	\$0	\$633,230	\$712,384	\$801,455	\$2,147,070	<b>\$1,766,557</b>
Net benefits	(\$21,000)	\$490,130	\$554,022	\$626,579	\$1,649,731	<b>\$1,353,201</b>
ROI						<b>327%</b>

## Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

### TOTAL ECONOMIC IMPACT APPROACH

**Benefits** represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

**Costs** consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

**Flexibility** represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

**Risks** measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."



### PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



### NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



### RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



### DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%; Forrester uses a 10% standard discount rate for TEI studies.



### PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

## Appendix B: Endnotes

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<sup>1</sup> Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

<sup>2</sup> Source: Forrester Analytics Consumer Technographics Benchmark Survey, Part 1, 2020, Forrester Research, Inc.

<sup>3</sup> Source: Forrester Analytics Consumer Technographics Global Online Benchmark Survey (Part 1), 2019, Forrester Research, Inc.

<sup>4</sup> Source: Forrester Analytics Consumer Technographics North American Online Benchmark Survey (Part 2), 2018, Forrester Research, Inc.

<sup>5</sup> Source: Forrester Analytics Consumer Technographics Benchmark Survey, Part 1, 2020, Forrester Research, Inc.

<sup>6</sup> Credit card and other online payment service transaction fees can vary. While a 2.25% rate is estimated for the composite organization, organizations that primarily do business internationally — or even other merchants in the US — may see a different average rate.

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