The New

VOLUME PRICE ANALYSIS

2022--2023

ALLEN VERONICA

Contents

Introduction

In the narrowest sense, price is the amount of money charged for a product or a service. But there must be more than that. What is a price really? Speaking broadly, the price is the sum of all the values that a customer gives up to gain the benefits of having or using a product or service. Thus, customers exchange a certain value for having or using the product – a value we call price.

Historically, price has been the major factor affecting buyer choice. However, in recent decades, non-price factors have gained increasing importance. Yet, the price is still one of the most important elements of the marketing mix. It may determine very much of a firm's market share and its profitability.

Worthy of note is the fact that the price is the only element in the marketing mix that produces revenue. All other elements, in fact, represent costs: the product must be developed and produced, the place means facility and transportation costs, and promotion is costly anyway. Also notable: the price is one of the most flexible marketing mix elements. While product features and channels, for instance, are rather inflexible, prices can be changed q uickly to meet changing conditions.

Without doubt, prices have a direct impact on the firms profitability. And even more important: the price is part of the firm's overall value proposition. Prices play a key role in creating customer value and building customer relationships. So – What is a price? As you see, price is so much more than only the amount of money charged for a product.

What is Market Demand and Its Importance?

Market demand refers to how much consumers want your product for a given period of time. Demand is determined by a few factors, including the number of people seeking your product, how much they're willing to pay for it, and how much of your product is available to consumers, both from your company and your competitors.

Market demand can fluctuate over time—in most cases, it does. This could be due to a variety of factors, some seasonal and predictable, others more out of our control, like a natural disaster or even a pandemic.

When more people want a specific type of product, this is an increase in market demand. Under these circumstances, prices typically go up—more people want it, and more people are willing to pay for it. But when market demand decreases, prices typically follow suit. It gets more complex than that, but we'll get into it later.

One common business mistake is not considering market demand for your venture, but especially when it comes to product development. You don't want to invest too much capital in products that no one will buy—sitting stock eats at your profits and takes up warehouse space.

On the flip side, you also want to make sure you always have enough to serve your customer base. Out-of-stocks are costly issues and could spoil your chance to snag a new lifelong customer.

What is the Difference between Individual and Market Demand?

As you might guess, individual demand refers to a single person or household, while market demand generalizes trends for many individuals in a particular segment. An individual who is passionate about dogs is more likely to pay more for a dog product than someone who has an average or minimal interest level. That individual's preferences might not reflect the trends of your entire target market.

So why is this important? It's important to understand that when you do your own market research to estimate demand, you need to survey many individuals—not just the individuals who have the most passion for your industry or product. If you forecast based on individual demand, you might have bad data and make yourself vulnerable to significant losses. Market demand is basically a bunch of individual demand data points put together.

What’s a Market Demand Curve?

The market demand curve is a visualization of demand based on product pricing. Essentially, you map all of the individual demand inputs onto a line graph to create the market demand curve.

On the y-axis, you have the different price points. On the x-axis, you have the number of times the product has been purchased in a given time period at that price point. You’ll have several lines, one for each individual, that typically slope downward. This is because when a product is priced higher, people are likely to buy less of it. On the flip side, the supply curve slopes upward.

Testing market demand at a local level

Shopify merchant Woodlot is a lifestyle and body care brand with roots in Vancouver. When Sonia Chhinji and Fouad Farraj wanted to try out a new line of candle products, they knew their hometown would be the best testing ground to see if there was any market demand and what that demand might be—both at a local and a global level.

Woodlot

They researched local neighborhoods and came up with a list of shops they wanted to target for wholesale, and inbound leads began trickling in. This initial demand helped them validate the venture and identify strong markets outside of the Vancouver area, as well as forecast demand for their business overall.

“It makes sense to start in your home city—it’s the one where you’re going to

get a lot of attention, a lot of support, and also a lot of opportunity, but eventually, you're going to need to expand and grow," Sonia says. "We were able to take that neighborhood idea and bring it to Toronto, to Montreal, and then other cities across Canada and the US."

Measuring market demand on ecommerce channels

Cinnamon and Jason Miles's Liberty Jane Clothing brand was born out of first-hand market research—their daughters. They started designing and creating doll clothes and testing ideas at home. They then took the ideas outside the home to get a better idea of what market demand could look like in the real world. "We would go to dance classes and Brownie troop meetings and all the mums and daughters would say, 'Where did you get that?' and 'How can I get it?'" Cinnamon recalls.

Liberty Jane Clothing

Eventually, they tested even larger waters, getting started with selling on eBay in 2008. Just 18 months later, they began publishing the patterns as an additional revenue stream. Now, they've taken advantage of that market demand to create a thriving ecommerce business that brings in as much as $600,000 per year.

Finding a product with stable demand

While some products are seasonal, and thus experience fluctuating demand, others are more level year round. One example is matcha—and that was one of the reasons some of us here at Shopify experimented with selling matcha online. In just three days, our store did more than $900 in revenue.

We looked at Google Trends to see that the product was emerging in

popularity and paired that with additional market research to validate demand. Because matcha isn’t a seasonal product, we were able to assume that demand would remain steady.

How to Find Market Demand

While 1:1 conversations with real people can provide a ton of valuable insights, there are ways to get additional data and make this process more valuable and streamlined.

There are two great places to “listen” to consumers: search engines and social media.

1. Use search engine optimization tools

Let’s consider our SEO tools. Keyword Surfer is a free Google Chrome add-on from Surfer SEO that lets you get insights from search engine result pages (SERPs) directly—no dashboard or login required.

It gives you search volume, keyword suggestions, and estimated organic traffic for all ranked pages. You can get a lay of the land before doubling down on a product idea inspired by search trends.

You can also find inspiration in Google Trends by typing in keywords, phrases, and topics to see how fre q uently users search these and related terms. You can filter by time period, country, and even city. It’ll also reveal where those searches are trending.

Much like the trending countries, the specific cities searching for our potential product give us insight into the distribution of interest and can give you insight into where you should focus your marketing efforts should you decide to move forward.

Check out Google’s “recently trending” page for emerging topics. Here, we can see there’s been some interest in the new iPhone. Ecommerce entrepreneurs might look at that as a way to drill down further into iPhone accessories specific to this model.

iPhone SE trends

Now we'll head over to Google Keyword Planner. (You'll need to open a Google Ads account, but it's free to do so. Creating an account now will ultimately be useful for when you launch your ecommerce business.)

Keyword Planner allows you to search for keywords to determine the average monthly search volume on Google for that term and related search terms. If we type in "iPhone accessories," Keyword Planner gives us a whole list of similar keywords that can serve as inspiration for product ideas and validation for market demand. Fewer searches likely indicates less demand.

iPhone Keyword Planner

For your own market demand research, use the targeting settings to get data from your intended market. You want to make sure you're targeting the countries you plan to sell to.

In your list of results, there are three things to pay attention to:

Long tail keywords. Long tail keywords are keywords that are made up of three or more words. You're not just looking for long tail keywords, but long tails that are closely related to your product and niche. For example, "hdmi to lightning cable" comes up in our iPhone research.

High search volume. This can be subjective. However, you want to look at long tail keywords that have a decent search volume each month. Higher search volume means more people are looking for your potential product. This can start to give you a good understanding of how in-demand your product is.

Competition. This column refers to how many other people are actively bidding for and competing to show up in q ueries related to that keyword. Low competition generally means that it would be easier to rank for these keywords and cheaper to purchase ads based on these keywords.

There is no minimum number of relevant searches per month we would recommend, but it's important to recognize the current potential. It's also relative to other product ideas and keywords.

Although Google sees its fair share of traffic and queries, it’s not the only place to learn about market demand. Enter social listening.

2. Use social listening tools

Social listening involves aggregating data from social media conversations about products, industries, brands, etc.

Many tools allow you to filter conversations, target specific geographic locations, and pull summarized analytics reports you can use in combination with other data. Each tool works differently but they all accomplish the same thing when it comes to researching market demand.

Essentially, you’ll enter a few keywords and the tool will pull social media posts that mention or are relevant to that keyword. You can see what the sentiment is, where people are talking about it, and even what they’re actually saying about it.

But market demand is about more than just calculating interest in a product. It’s also about understanding how much of a product your market will purchase and at what price point.

Look at public information about product sales—industry reports, case studies, etc. A good old-fashioned Google search is also a great starting point. We searched “how many people purchase iPhones?” and found this data from Statista:

iPhone sales

If we were to go the iPhone accessories route, we could use this number as a starting point to estimate the potential market demand, and then drill down further into accessory data to get a better estimate.

Now we need to look at pricing. Find what your competitors are selling the same or similar products for. It’s a good idea to check out a range of competitors here, both direct-to-consumer brands and third-party

marketplaces. These are important data points to note.

How do you Calculate Market Demand for a Product?

Ready to put all this information to work? Let’s crunch some numbers in a hypothetical example.

We’ll go back to the iPhone accessories idea—we want to sell “Billie Eilish iPhone cases,” which was another one of our long tail keywords we found in Google’s Keyword Planner.

A q uick look on Google Shopping shows that these phone cases go for anywhere from less than $1 to as much as $25 per case. These are important data points.

Now, we look at individual demand. How many Billie Eilish iPhone cases do people buy and at what price level?

Riley, our first customer, likes to switch out her phone case fre q uently—and she also breaks it a lot. She typically buys a new iPhone case every month—over the course of a year, six of those feature Billie Eilish. Our second customer Sandra makes her cases last longer, so she only buys two a year. Both of those are Billie Eilish.

However, as we adjust the given price, we also influence both Riley and Sandra’s behavior. Increased prices will make them both purchase iPhone cases less fre q uently.

Here’s what that looks like for a full year:

Example of how you calculate market demand for a product

When prices increase, Riley and Sandra buy fewer iPhone cases, impacting market demand.

Notice how as prices go up, demand goes down. That’s pretty much universal for all products and all markets (though there are always exceptions). To get an idea of total market demand, you’d repeat the above process for each customer.

Bringing it all together

It’s always great to be excited about your business idea. It’s e q ually important to logically and objectively analyze the viability of your product by determining whether there’s market demand for it. When you understand market demand, it’s easier to accurately forecast so you don’t fall victim to purchasing too much or too little inventory. Happy researching!

How to Price a Product: A Scientific 3-Step Guide (With Calculator)

Product pricing is an essential element in determining the success of your product or service, yet eCommerce entrepreneurs and businesses often only consider pricing as an afterthought. They settle and use the first price that comes to mind, copy competitors, or (even worse) guess.

Humans are irrational. Product pricing strategy is just as much as an art form as it is a science.

Today, I'll be breaking down the scientific side of how to price your product.

There are lots of resources out there on the art of pricing, but this step-by-step guide will provide you with the tools and strategies you need to create a reliable, data-backed pricing structure for your product.

Use this product pricing calculator to help you price your product

Step 1: Find Your Base Price By Getting To Know Common Pricing Strategies In Your Industry

Step 2: Capture More Market Share By Experimenting With Pricing (And Understanding Price Elasticity)

Step 3: Make Sure Your Product Pricing Drives Long-Term Business Profit

There are lots of product-pricing strategies out there based on the study of human psychology.

Ending your price with a 9 or a 5, for example, is called "Charm Pricing." Millions of businesses have used charm pricing to price their products, and it's proven to increase sales.

Or there's "The Rule of 100," a fantastic psychological hack to maximize the perceived magnitude of your discount, no matter the discount size. With The Rule of 100, businesses use percentage amount discounts for items under $100 and dollar amount discounts for items over $100.

Without a doubt, psychology is an important part of pricing.

But let's take a look at scientific approaches and strategies. Follow these steps to arrive at the optimal price for your product.

Step 1: Find A Base Price By Getting To Know Common Pricing Strategies In Your Industry

Thousands of entrepreneurs and decades of learning have paved the way for new businesses to craft a strategy that utilizes the most innovative pricing options available.

Knowing which pricing models work best in your industry can simplify how you price a product, and give you confidence knowing that you're not simply guessing.

Cost-Based Pricing

One of the most simple ways to price your product is called cost-plus pricing.

Cost-based pricing involves calculating the total costs it takes to make your product, then adding a percentage markup to determine the final price.

Screenshot showing cost-plus pricing diagram

For example, let's say you've designed a product with the following costs:

Material costs = $20

Labor costs = $10

Overhead = $8

Total Costs = $38

You then add your markup percentage, let's say 50% (retail industry standard), to the total costs to give you a final product price of $57.00 ($38 x

1.50). If you remember our “Charm Pricing” tactic from the beginning, you might mark this product at $57.99.

This method is simple, fast, and lets you q uickly add a profit margin to any product you intend to sell.

Market-Oriented Pricing

Also referred to as a competition-based pricing strategy, market-oriented pricing compares similar products (competition) in the market.

The seller sets the price higher or lower than their competitors depending on how well their own product matches up.

Screenshot showing a diagram of market-oriented pricing

Price above market: Consciously pricing your product above the competition to brand yourself as having a higher-quality or better-performing item

Copy market: Selling your item at the same price as your competition to maximize profit while staying competitive

Price below market: Using data as a benchmark and consciously pricing a product below competitors, to lure customers into your store over theirs

Each of the above strategies in the market-oriented model has its pros and cons. With market-oriented pricing, it’s important to understand the costs of making your product, as well as the quality compared to competitors to accurately price your product.

Dynamic Pricing

Dynamic pricing, also referred to as demand pricing or time-based pricing, is a strategy in which businesses set flexible prices for a product or service based on current market demands.

In other words, dynamic pricing is the act of changing a price multiple times throughout the day, week, or month to better match consumer purchasing habits.

Here's how it might look for eCommerce businesses in action:

Two graphs showing dynamic pricing

It's not just services like Uber that take advantage of dynamic pricing to maximize profits. Amazon has long been using price surges on their most-competitive items for big eCommerce shopping days such as Black Friday and Cyber Monday.

Amazon prices fluctuate so frequently that the price-tracking site camelcamelcamel checks prices for popular items several times per day.

Graph showing amazon price history for a product

There are a ton of great software products out there that will help you to automatically apply dynamic pricing to your products, without breaking the bank or pulling your hair out.

Tool 1: Quicklizard

Tool 2: Omnia Retail

Tool 2: Profit Peak by Splitly (Amazon-Specific)

These tools allow you to set specific pricing guidelines by targeting certain margins that will help your eCommerce business to remain profitable.

Step 2: Capture More Market Share By Experimenting With Pricing (And Understanding Price Elasticity)

Lots of businesses fall into the trap of thinking if they lower product prices, more people will buy the product and their revenue will increase.

“The problem with the race to the bottom is that you might win. Even worse, you might come in second.”— Seth Godin

Strategically lowering product costs does have benefits, and can lead to increased revenue. For one, it reduces the amount of money being left on the table (consumer surplus) for customers who are willing to buy at various price points.

Put simply, Consumer Surplus is the difference between what the consumer pays and what he would have been willing to pay.

Picture of a graph showing surpluses

So how do you maximize profits while also capturing more market share?

You need to understand the sales volume of a product at specific price points, and what allows you to remain profitable. In other words, you need to understand price elasticity.

What is Price Elasticity?

Price Elasticity is a measure of the relationship between a change in the q uantity demanded of a particular good and a change in its price. If the quantity demanded of a product exhibits a large change in response to its price change, it is termed “elastic”.

For a second, imagine you have 100 customers that purchase your product:

Screenshot showing a table of 100 potential customers

After testing pricing, you find customers convert at different rates depending on the price of the product. You also find that sales volume fluctuates with price:

Graph showing Sales

Given this small amount of data, you can now easily calculate how much revenue is generated from each price point. Theoretically, this is a great way to improve upon the “base” product price that you calculated in step one:

Screenshot showing a table of 100 potential customers

But there’s one small problem…

Screenshot showing a table of 100 potential customers

What about the 65 customers that would have purchased at a $5 or $10 price point?

That’s $450 in revenue that you are losing out on. No sane business owner wants to do that, which is why you need a strategy to unlock that untapped gold mine.

There are lots of pricing strategies out there to do this, but my three favorites for profitably lowering prices are discount pricing, loss-leader pricing, and anchor pricing.

Discount Pricing

Discount pricing is a strategy where items are initially marked up artificially or start at a higher price, but are then offered for sale at what seems to be a reduced cost to the consumer.

Screenshot showing a product for sale

An online retail store, such as Macy’s shown above, might offer discount pricing on all of its kitchen items for a limited time to attract new customers and boost sales.

This is a simple way to attract new customers that might not have bought a particular item at a higher price.

The key to ensuring that the discount pricing strategy remains profitable for your business is to keep the profit margins close to $0 or slightly positive. In other words, don’t sell your products at a discount just to get customers in the door, only to find out you’re losing money hand over fist.

Attract customers with discounts, keep your profit margin on discounted items close to $0, and then upsell or cross-sell other items in your store to turn a profit.

That is, unless you want to give loss-leader pricing a shot....

Loss-Leader Pricing

Similar to discount pricing in strategy, loss-leader pricing takes a slightly more risky approach to attracting purchasers.

According to Inc. “Loss-leader pricing is an aggressive pricing strategy in which a store sells selected goods below cost in order to attract customers who will, according to the loss-leader philosophy, make up for the losses on highlighted products with additional purchases of profitable goods.”

Patagonia is a perfect example of loss-leader pricing done right. First, they start with a “Web Specials” page that they promote via email and social media:

Screenshot showing patagonia

In examining their Web Special products, many items are sold at 25-75% below normal retail price:

Screenshot showing products on patagonia

The key difference with loss-leader pricing vs. standard discount pricing is businesses often know that they will not make a profit on items sold as loss-leaders. And that starts with a deep understanding of your product costs and profit margins.

Use this product pricing calculator to find the best price for your product.

Using this pricing strategy can help attract large numbers of customers who would otherwise shop elsewhere, and some of them will buy items with a higher profit margin.

Anchor Pricing

There's a great video of Steve Jobs announcing the iPad price on stage in 2010.

He rhetorically asks the attendees what they should price the iPad at.

"If you listen to the pundits, we're going to price it at under $1000, which is code for $999," says Jobs.

$999 appears on the screen before he continues…

"I am thrilled to announce to you that the iPad pricing starts not at $999, but at just $499."

On the screen, the $999 price is shattered by a falling "$499."

That's anchor pricing at its absolute finest.

Anchor Pricing is where you display your "regular" price and then visibly lower the price of that item in stores or online. It works so well because it helps you to create an image in shoppers' minds that they're getting an incredible deal.

Little do they know that the regular price was made up in the first place!

Step 3: Make Sure Your Product Pricing Drives Long-Term Business Profit

At this point, you should have some idea of where you're going to start with pricing your product.

But our work here isn't done.

To ensure that you maintain long-term product profitability you must analyze your current business metrics, as well as design a plan to constantly experiment moving forward.

Analyzing your Current Metrics

The pricing strategies covered above offer good guidance on how to price a product.

However, the mix of pricing strategies you implement must result in enough income to cover your overhead expenses, while also leaving you a bit of profit to spark continuous growth.

Overhead expenses that you should consider include:

Rent

Manufacturing costs

Facilities costs

Utilities

Staff salary and related costs

Marketing costs

Professional fees, licenses, or permits

Packaging costs

Shipping supply costs

Website maintenance costs

Personal income

Taxes

I recommend calculating your overhead expenses on a monthly basis. That way you'll have a running and accurate total at all times — allowing you to proactively price your product based on your findings.

If you find you're operating at a month-over-month net loss, you can

q uickly make decisions to return to profitability.

Experiment with Pricing

There are many things that directly affect the pricing of a product. That's why it's important to not allow your pricing strategy to remain static.

Prices that fluctuate and move with the market will help to increase revenue and decrease consumer surplus.

Here are three great ways you can experiment with your pricing:

1. Raise Your Prices on Best-sellers

We've talked about how lowering product prices can lead to a reduction in consumer surplus, well raising your prices can have a similar positive effect.

If one or more of your products is selling at a high volume, experiment with raising its price. This will increase your gross revenue and allow you to make up for any other products that aren't pulling their weight.

One way to offset the potential negative impacts of raising your prices is to experiment with pairing higher prices with free shipping. This will help to make your customers happy while also increasing your bottom line.

2. Take Advantage of Seasonal Discounts or Promotions

Seasonal sales and promotions are one of the best ways to attract more customers to your website or physical store.

Even something as small as offering "free shipping" can help to increase customers and revenue.

According to First Round Review, Amazon famously drove up its purchase volume by offering free shipping for all orders over $25 (after an increase to $35 and back down to $25 in 2017). Free shipping is an attractive incentive

because it appeals to anyone who is getting something mailed to them.

3. Model, Don’t Copy Your Competitors

As with any great business or pricing strategy, looking towards the market (particularly your competitors) is a great way to stay on top of current pricing trends.

Everything from stock market fluctuations and employment rates, to new laws and trends, can affect the price that people are willing to pay for your product.

That’s why it’s important to keep an eye on the market and your competitors.

But remember, you are operating on your terms with your overhead expenses and profit margins. So while it’s great to evaluate how they’re pricing their product, you need to put your business first.

According to PWC’s “2018 Global Consumer Insights Survey,” global retail eCommerce sales will reach $4.878 trillion by 2021. That’s an 18% increase in worldwide eCommerce sales, from $1.845 trillion in 2016 to $4.878 trillion in 2021

Millions of business are vying for customers’ attention.

One way to gain a competitive advantage in this wild marketplace is to have a product pricing strategy that is dynamic — one that moves with the market, and one that allows your business to remain profitable all at the same time.

The last thing you want is customers leaving your store because you fail to adapt, and update the value of your product.

Use this step-by-step guide constantly throughout the year. Save it to your bookmarks, add it to pocket, do whatever you have to do to keep yourself accountable for ensuring that your product pricing strategy remains competitive.

What is Volume Price Analysis?

Let’s start with a q uick crash course on the market, supply and demand. An understanding of the imbalance between supply and demand can serve as a fundamental factor in making better trading decisions. When market conditions are entirely normal, supply and demand have the most significant impact on commodities. If more of a good is needed and the supply is dwindling, the price will invariably go up. The opposite is also true; when supplies are high, but demand is low, prices tend to go down.

This is true for the financial market as well. If you trade in the foreign exchange market, any increased demand for dollars will cause the dollar’s price to rise in relation to the value of other currencies.

What volume price analysis does is it allows you to look deeply into market structure and grasp processes that move a price. With that information, you can guide your trading decisions.

Experts have discovered that people who make informed trading decisions that include a thorough review of price volume tend to be more successful than traders who do not analyze this indicator.

Volume Predicts the Future (Sort Of)

If we all had crystal balls that predicted market moves, we’d all be millionaires. Volume is the next best thing to a crystal ball.

Beyond determining whether a market is bearish or bullish, it tells you what traders will be doing in the minutes, hours, and days that lie ahead.

With great information, you can make timely and strategic trading decisions that help you come out as a winner. More importantly, there may be developments, actions or activities on the part of companies that have

triggered significant moves in volume.

In a sense, this indicator gives you a heads up that there is more research to do. You could say if you were looking for stock market jobs, volume price analysis could be helpful.

Two Main Market Phases: Accumulation & Distribution

Like most things in life, the structure of the commodity market is cyclical in nature. In fact, we can break the cycle into two distinct phases, alternately passing through each other:

Accumulation phase (balance)

Distribution phase (imbalance)

A struggle between buyers and sellers characterizes the Accumulation phase. Traders are entering positions that eventually turns the “balance” state into one of “imbalance.”

At this point, one side begins to dominate, either buyers or sellers; i.e. a bull vs bear market. Volume price analysis can help determine that.

It’s worthwhile to note that this process is spontaneous in nature; and it’s duration varies. Ultimately, the end result is always the same: a transition to the distribution stage.

Once the balance scales are tipped, we enter the Distribution phase. A telltale characteristic of this phase is a rapid price change. At this point, buyers or sellers are strongly dominating the market, pushing the price up.

Eventually, we cycle back into the accumulation phase as buyers and sellers search for a fair price again.

However, the distribution stage does not always stem from the accumulation stage. A classic scenario is the release of some fundamental catalysts like economic or financial news that impacts trading decisions.

Not surprisingly, news like interest rate changes, earnings releases and new product announcements all impact traders' decisions. And we see this impact in the form of imbalance in the market.

How do you Read Volume Price Analysis?

The A/D is considered strong if there is a wide range between an asset's price at market open and market close. Traders, however, should also consider the patterns made by the highs and lows of the A/D indicator. Rather than movements reflecting individual assets, currencies, or commodities, they can also indicate a low, upward trending market in general. It's important to note that there are times when asset volumes rise ahead of any sharp sell-offs, which can create a strong diversion. When this is the case, volume indicators, like volume price analysis, will need to be used along with other signals; such as other fundamental and technical indicators.

Let's Talk About the On-Balance-Volume Indicator

Developed by Joseph Granville in 1963, the on-balance volume (OBV) indicator is a technical trading momentum indicator.

OBV uses the previous day's price movement to predict stock price. The indicator will move, whether higher or lower, long before the actual prices start moving.

By looking at whether prices rose or fall, you can make educated decisions in the current day's trading decisions.

In this strategy, you can find a buying opportunity via a new high that indicates a bullish market rather than a bearish one. An on-balance volume that's lower will indicate a bear market.

Furthermore, shifts in divergence or price can be identified when the on-balance volume signal is different from an asset's actual market price.

Why is Volume so Incredibly Important?

There are two primary reasons why volume is so incredibly important. To start, it offers a window into the minds and hearts of other traders.

It's excellent for identifying fear that might incite rapid sell-offs and significant price changes. Likewise, paying attention to this factor is the easiest and most effective way to identify trends on your own.

Volume Price Analysis Will Always Perfectly Reflect Price

This number reflects the total sum and the total value of every transaction at a specific point in time. The volume indicator will always perfectly reflect the price.

In fact, if you've been using candlestick charts, you'll find this tool to be infinitely easier to leverage. If you've been wanting to learn how to read candlestick charts but have had only nominal success, using this indicator is a far better choice.

You'll have a clearer understanding of what you are looking at; and a much easier time interpreting the data and putting your idea in action.

Volume Tells Us If the Market Is Bullish or Bearish

Volume verifies trends. When asset prices rise with a large volume, this means that a trend is strong. To put it plainly, this is a bullish signal.

Conversely, if there's high volume and the asset price drops, you know that people are selling their stocks off. In other words, it can inform your movements so that you're able to mitigate your losses by taking timely action.

What is a Good Trading Volume?

Volume is a great trading tool. Therefore, volume price analysis is a great technical indicator. 20 million in volume is a good general rule of thumb. The more volume, the more li q uidity. The more liquidity, the better your entries and exits fill.

Volume Price Analysis Confirms Patterns

Various chart patterns can be confirmed by volume as well. These include head and shoulder patterns, flags and triangles.

In fact, most seasoned traders use volume when attempting to make these confirmations. When volume is high, the formation of chart patterns is easy to identify and confirm.

Volume Displays Emotions

Volume remains one of the most important and valuable psychological indicators available. It allows traders to see when others are anxious and fearful, and above all, ready to sell-off.

It additionally helps people spot possible price hikes due to bullish trading. This tool is especially important for day traders who re q uire comprehensive and real-time information.

Volume, the core element of market structure

It's no secret that the price change is depending on a change in the supply-demand ratio. If buyers dominate the market, then the price moves up and vice versa.

If you take a closer look at the trading process, you will notice that the traded volume is moving the price at a given moment in time. For example, if we send a Market Order to buy 10 lots of an asset, and the nearest opposite Sell

Limit order has a volume of 1 lot, then we will buy it and redeem the next level after it, and then the next, and so on until the entire order in 10 lots will be executed. Thus, we have created an upward price movement using our market order.

Actions in DOM trader panel

Such a struggle between buyers and sellers constantly occurs within the accumulation stage. Therefore, it is critically important for us to understand what levels at this stage have taken place. Fortunately, we can easily identify levels on which, was accumulated the largest volume.

Reaction of the price to the volume

We see how the asset’s accumulated volume was distributed downward by the trend, after which it returned to the same zone, and then was distributed downward again, after which a new accumulation stage took place. Then was a small distribution and again the accumulation stage in the zone of volumes formed last week.

Maximum volume in one trade

And again, at the selected level, we see that there was a maximum one-time trade, which confirms the fact of a major participant presence, and, most likely, it was the trigger that gave the start to the distribution stage.

This trade was a part of the accumulation stage that occurred at the end of last week, after which there was a rapid distribution stage, and subse q uently, the market used all the following week to use this zone as a strong support zone.

Strong support zone

This behavior of the price says that the large participant protected his long position.

Delta metric — shows the difference between the volume of all trades, having an aggressor marker of purchase and all trades with an aggressor marker of sale.

Here it is necessary to give a small explanation. Each trade has two participants: the buyer and the seller. One participant entered the market using market order or an aggressive limit, the second one had a limit order in the DOM.

The aggressor marker is assigned to the direction of the market order or aggressive limit. For example, let's buy 10 lots at the market price and let's say that the counterparty has a limit order of 10 lots. Because of the purchase is made at the market, and the sale is made from the limit order, the trade will have an aggressor's marker of Buy.

The general formula can be described as follows:

Aggressor Buy: Last >= Prev. Ask

Aggressor Sell: Last <= Prev. Bid

Aggressor None: Bid < Last < Ask

The absolute value of the delta is primarily an auxiliary metric. The dominance of one of the market sides does not mean that the distribution stage will occur in the same direction.

In practice, the net delta indicators are used more often. These are the price levels at which all 100% of trades had the same aggressor marker, indicating, that all the participants completely made purchases/sales in the same

direction at market price. This techni q ue is used when the price goes to a significant level of resistance/support and from which a significant reaction is expected.

Don’t be afraid to try. Like it or not, there’s a certain amount of trial and error inherent in the process of trading. Bullish Bears will provide you the guidance you need to get started in your trading journey.

Volume-by-Price

Volume-by-Price is an indicator that shows the amount of volume for a particular price range, which is based on closing prices. Volume-by-Price bars are horizontal and shown on the left side of the chart to correspond with these price ranges. Chartists can view these bars as a single color or with two colors to separate up volume and down volume. By combining volume and closing prices, this indicator can be used to identify high-volume price ranges to mark support or resistance. StockCharts shows twelve Volume-by-Price bars by default, but users can increase or decrease this number to suit their preferences.

Calculation

Volume-by-Price calculations are based on the entire period displayed on the chart. On a five-month daily chart, Volume-by-Price would be based on ALL five months of daily closing data, while on a two-week 30-minute chart, it would be based on two weeks of 30-minute closing data, and on a three-year weekly chart, it would be based on three years of weekly closing data.

There are four steps involved in the calculation.

This example is based on closing prices and the default parameter setting.

1. Find the high-low range for closing prices for the entire period.
2. Divide this range by 12 to create 12 e q ual price zones.
3. Total the amount of volume traded within each price zone.
4. Divide the volume into positive volume and negative volume (optional).

Note that negative volume for a price zone is the sum of volume for all down days in that zone, while positive volume is the total of volume for all up days in that price zone.

What is Volume-by=Price Bar?

The Volume-by-Price bars represent the total volume for each price zone. Volume can then be separated into positive and negative volume.

Interpretation

Volume-by-Price can be used to identify current support and resistance levels as well as estimate future support and resistance levels. Price zones with heavy volume reflect elevated interest levels that can influence future supply or demand (a.k.a. resistance or support). Long Volume-by-Price bars underneath prices should be watched as potential support during a pullback. Similarly, long Volume-by-Price bars above prices should be watched as potential resistance on a bounce.

Price breaks above or below long Volume-by-Price bars can also be used as signals. A break above a long bar shows strength because demand was strong enough to overcome a supply overhang. Similarly, a break below a long bar shows weakness because supply was ample enough to overwhelm demand.

Nuances

Before looking at some examples, it is important to understand how Volume-by-Price works. Volume-by-Price can be used to identify current support or resistance. Current bars should not be used to validate past support or resistance levels because the indicator is based on all the price-volume data shown on the chart. This means six months of data for a chart that extends from January to June. Bars may appear to identify support in March, but keep in mind that the indicator data extends well beyond March because the chart ends in June.

Chartists should also understand that big gaps can produce bars that e q ual

zero. This makes sense because Volume-by-Price equals zero when there are no closing prices within a specific price zone.

Identifying Resistance

The chart for TE Connectivity (TEL) shows Volume-by-Price identifying resistance around 26-26.5 in early August. Remember, the April break above this bar is not really a breakout because the current Volume-by-Price calculation extends from January to early August. The second longest bar marks current resistance in the 26-26.5 area. TEL is at its make-or-break point with prices near resistance.

A break below a long Volume-by-Price bar signals increasing supply or selling pressure that can foreshadow lower prices. Long bars below prices show elevated interest areas and potential support. A break below this support zone signals a significant increase in selling pressure and lower prices are then expected.

The SanDisk (SNDK) chart shows a long Volume-by-Price bar marking support in the 39-43 area in mid-August. Also, notice that the stock forged at least three reaction lows around 42 from early July to mid-August. This support (demand) zone is clearly marked. The second chart shows SNDK breaking below the previously identified Volume-by-Price support zone with high volume. Demand crumbled, supply won the day and prices moved sharply lower.

Resistance Breaks

A break above a long Volume-by-Price bar signals an increase in demand that can foreshadow higher prices. Long bars above prices mark supply overhangs that demand has not been able to overcome. A break above this resistance zone signals strengthening demand and higher prices are expected.

Sometimes chartists need to combine price action and Volume-by-Price to

identify support zones and resistance zones. The McDonalds (MCD) chart shows a long bar marking overhead supply between 60 and 61. The stock also met resistance between 61 and 62 with reaction highs in late April and mid-June. For support, the second and third longest bars mark potential demand in the 57.5-58.5 area and the stock is near the late May low. Overall, a large Symmetrical Triangle could be forming on the price chart as MCD tries to hold above the late May low. The second chart shows MCD breaking resistance in July and surging to new highs in August.

What does Volume Mean in the Market?

The market is made up of buyers and sellers; for a transaction to occur, there must be a willing buyer and seller. A unit of volume, therefore, represents a transaction between a buyer and a seller.

The term ‘volume’ means different things for securities that trade in different marketplaces. For forex and other securities that trade over the counter (OTC), the volume might mean the number of ticks (price changes) that occurs in a given time interval. The reason is that there’s no centralized exchange where transactions are recorded. And more importantly, the volume data represents what happens at a particular liquidity provider only.

Volume Indicators: How to Use Volume in Trading (List)

For stocks and other securities that trade on standard exchanges, such as futures and options, the volume is a measure of the number of shares or contracts transacted over a specified period of time. In order words, it shows how many times the security has been bought or sold over a given timeframe. The timeframe can be one minute, four hours, one day, or anything.

In most charting platforms, the volume indicator is presented in a separate window below the price chart, just like other indicators used in technical analysis. The volume transacted in the given timeframe is represented as a bar, which can be color-coded.

The color of the bar shows whether the security’s price closes up or down. A green bar is generally used to show that the security closed higher during the trading session while a red bar is used to indicate that the security closed lower. The height of the bar shows whether there’s an increase or a decrease in volume of the security transacted — a taller bar shows a higher volume while a shorter bar shows a lower volume.

The Significance of Little Volume

It makes little sense to analyze the volume alone. To correctly interpret the volume data, it must be seen in the light of what the price is doing. So the implication of a small trading volume depends on the price movement.

If the price is rising in an uptrend but the volume is reducing or unchanged, it may show that there's little interest in the security, and the price may reverse. Similarly, when the price is rapidly declining but the volume is low, it could mean that the institutional traders are not interested in the price direction. So the price will soon reverse to the upside.

The Significance of High Volume

A high volume usually indicates more interest in the security and the presence of institutional traders. How the volume will affect the price movement depends on the market situation. In an uptrend, an increasing price accompanied by a rising volume may be a sign of a healthy uptrend. In the same way, a declining price in a downtrend occurring with an increasing volume indicates a possible downtrend continuation.

However, for a prolonged uptrend or downtrend, the case is different. A rapidly rising price in an uptrend accompanied by a huge volume may be a sign of exhaustion — a situation known as a buying climax. Similarly, a rapidly declining price in a prolonged downtrend occurring with a huge volume might mean capitulation — a situation where hesitant investors finally give up on the market and massively sell their stocks.

To help traders and investors better interpret the volume of the market, there are many volume-based indicators you could use. Let's take a look at some of the most common volume indicators around.

Volume Indicators

Apart from the volume itself, there are a lot of other indicators that are based on the volume data. Analyzing those volume indicators has always helped traders and investors to better understand what is happening in the market. Here are some of the commonly used volume indicators:

OBV indicator

Volume RSI

Volume price trend indicator

Money flow index

Chaikin money flow indicator

Accumulation/distribution

Ease of movement

Negative volume index

Volume-weighted average price

OBV Indicator

The OBV indicator, popularly known as on-balance volume, is a technical analysis indicator that relates volume flow to changes in a security's price. It uses a cumulative total of positive and negative trading volume to predict the direction of price. The OBV is a volume-based momentum oscillator, so it is a leading indicator — it changes direction before the price.

This volume indicator was created by Joseph Granville in his 1963 book titled, "Granville's New Key to Stock Market Profits". Granville proposed the theory that changes in volume precede price movements in a measurable way. He believed that volume was the main force behind major market moves and thought of OBV's prediction of price changes as a compressed

spring that expands rapidly when released.

He gave the formula OBV as:

OBV = OBVpre +

Where:

OBV = current on-balance volume level

OBVprev = previous on-balance volume level

Volume = current trading volume

How OBV is Calculated

OBV is a running total of the trading volume and shows whether there's an inflow or outflow of volume. So, depending on how the current price closes relative to the preceding session's close, there are three ways the current OBV can be calculated:

If the current session's closing price is higher than the preceding session's closing price, then: Current OBV = Previous OBV + Current session's volume

If the current session's closing price is e q ual to the preceding session's closing price, then: Current OBV = Previous OBV

If the current session's closing price is lower than the preceding session's closing price — Current OBV = Previous OBV – Current session's volume

How to Interpret the OBV

It is believed that the OBV shows the interactions between the institutional and retail traders in the market. The OBV is plotted as a line chart on a separate window from the main price chart. Being a cumulative total volume, the OBV indicator should be going up when the price is going up and be going down when the price is falling.

If the price makes a new high, the OBV should also make a new high. If the OBV makes a lower high when the price makes a higher high, there's a classical bearish divergence — indicating that only the retail traders are buying. Another type of bearish divergence occurs when the price remains relatively q uiet and fails to make a higher high but the OBV soars higher than the previous high — indicating that the institutional traders are accumulating short positions. In both situations, the chances are high that the price will turn downwards.

On the other hand, if the price makes a lower low and the OBV makes a higher low, there is a classical bullish divergence, showing that the institutional traders don't believe in that move. Also, if the OBV makes a lower low when the price is relatively unchanged or makes a higher low, a non-classical bullish divergence occurs, indicating that the smart money (institutional traders) is accumulating long positions.

Volume RSI

The volume RSI is a volume indicator that measures the speed and change of volume during the price up-close (up-volume) and during the price down-close (down-volume). It is a momentum indicator that tries to gauge changes in price trend via changes in bullish (when the price closed up) and bearish (when the price closed down) volume data.

In other words, the volume RSI is similar to the price-based RSI, except that changes in volume data are used instead of changes in price. However, the direction of the change (up-volume or down-volume) is determined by the direction of price close. So this volume indicator compares the volume traded during trading sessions when price closed higher to the volume traded when price closed lower to know which is stronger.

How is Volume RSI Calculated?

Volume RSI is calculated like the price-based RSI, the difference being that volume data is used instead of price data. The calculation follows a four-step process:

Calculating the up-close and down-close changes in volume

Getting the n-period smoothed moving average of the up-volume and down-volume

Calculating the relative strength factor (RS)

Calculating the RSI

Calculating the up-volume and down-volume:

If price closed up, Up-volume = current volume – previous volume, and Down-volume = 0

If price closed down, Down-volume = previous volume – current volume, and Up-volume = 0

If price closed unchanged, Up-volume = 0, and Down-volume = 0

Getting the n-period smoothed moving average (SMA) of the up-volume and down-volume:

The first averages are calculated as follows:

First Average Up-volume = Sum of Up-volumes over the past n periods / n.

First Average Down-volume = Sum of Down-volume over the past n periods / n

The other averages are calculated from the previous averages and the current Up-volume/Down-volume:

Average Up-volume = [(previous Average Up-volume) x (n – 1) + current Up-volume] / n.

Average Down-volume = [(previous Average Down-volume) x (n – 1) + current Down-volume] / n.

Calculating the relative strength factor (RS):

The relative strength factor is the ratio of the Up-volume Averages to the Down-volume Averages:

RS = SMMA (Up-volume, n)/SMMA (Down-volume, n)

Calculating the RSI:

RSI = 100 – [100/(1 + RS)]

How to Interpret Volume RSI

The volume RSI is interpreted the same way as the price-based RSI. Just like the price type, the volume indicator oscillates between 0 and 100% and around the 50% line. Below the 30% line is considered oversold while above the 70% line is considered overbought.

When the indicator is rising from the oversold region and crosses the 50% line, bulls are dominating. On the other hand, when the indicator is coming down from the overbought region and crosses the 50%, bears are dominating.

Volume-Price Trend Indicator (VPT)

Volume-price trend, also called price-volume trend (PVT), is a volume indicator that relates the volume of security transacted with the fractional change in price. It helps to determine both the price direction and the strength of the price move. Thus, the VPT shows the balance between the demand and supply of the asset and how it affects the price.

This volume indicator is a running cumulative value, so it adds or subtracts a product of the current volume and a fractional change in price to the previous VPT value — depending on the direction of the security's close price — to get the current VPT value.

How to Calculate the Volume-price Trend Indicator

The volume-price trend indicator is calculated as follows:

$$VPT = VPT_{prev} + Volume \times \{(Price\ Close_{current} - Price\ Close_{prev})/Price\ Close_{prev}\}$$

Where:

VPT = Current value of the Volume-price Trend

VPT_{pre} = Previous value of the Volume-price Trend

Volume = Current Session's Volume

$Price\ Close_{current}$ = Current Session's Closing Price

$Price\ Close_{prev}$ = Preceding Session's Closing Price

Just like the on-balance volume, the start point in the indicator is taken arbitrarily, so the actual value of the indicator is not that important — the shape of the line graph is what matters. Unlike the OBV which uses volume alone in accordance with the direction of price close, the VPT factors in the extent of the higher or lower price close.

What does the Volume-price Indicator Tell You?

The interpretation of this volume indicator is similar to that of OBV. The main idea is there’s a higher volume when the price is moving in predominant trend direction and less volume when the price is moving against the main trend. So if the main trend is up, the volume is expected to be high for a trading session that closes up, and in a downtrend, the volume should be high for sessions that close lower.

Since the VPT is a cumulative direction-based value, it should be going up when a session is trading up in an uptrend and be going down when a session is trading down in a downtrend. If the price makes a higher high in an uptrend, the VPT should too; if not, a bearish divergence is created which might signal a price reversal. The opposite is the case in a downtrend — if the price makes a lower low, the VPT should also make a lower low, and if it doesn’t, a bullish divergence is formed

Volume Oscillator (VO)

The volume oscillator is a volume indicator that displays the difference between two volume-based moving averages as a percentage of the slower moving average. It consists of two moving averages of the volume data, one fast and the other slow. The difference between the two moving averages is expressed as a percentage of the slower moving average.

In essence, the indicator is similar to the OsMA (oscillatory moving average indicator), except that volume data is used instead of price. Sometimes, chartists add a moving average of the difference to serve as a signal line, thereby making the indicator look more like a volume-based MACD, and calls the indicator percentage volume oscillator (PVO).

How to Calculate the Volume Oscillator

VO = {(short EMA of volume – long EMA of volume)/long EMA of volume} x 100

Where:

VO = volume oscillator

Short EMA of volume = short-period exponential moving average of volume (usually 12 or 14 periods)

Long EMA of volume = long-period exponential moving average of volume (usually 26 or 28 periods)

In the PVO indicator, a 9-period moving average of the VO is added as a signal line.

How to Interpret the Volume Oscillator

The VO is usually displayed as a single line that oscillates around the zero line, but it can also be displayed as bars above and below the zero line. When the indicator is at the zero level, it means that the faster moving average is crossing the slower moving average, as the difference between the moving averages will be zero.

When the indicator is rising above the zero line, the faster moving average is rising above the slower moving average — indicating a short-term surge in volume. Falling below the zero line means that the faster moving average is falling below the slower one, showing a decline in volume.

It is expected that strong price moves, up or down, should be accompanied by an increase in volume. So the indicator helps to confirm the force behind price movements. An increase in price in an uptrend or a decrease in price in a downtrend accompanied by a rise in the volume oscillator is a sign of strength in the trend direction. When such moves are accompanied by a decrease in the volume oscillator, there’s a weakness in that trend direction.

Conclusion

Volume analysis is a powerful trading techni q ue that allows you to look deeply into market structure and grasp processes that move a price.

In an efficient market, which are all modern stocks and futures markets, the price is always fair and already has included all events that were happened for the current moment.

Inefficient or weakly efficient markets, like crypto-assets, allow you to use more simple techni q ues that are based on technical analysis or price action. But anyway all of them tend to become efficient.

Thus, an understanding of the imbalance between supply and demand can serve as a fundamental factor in making better trading decisions.

Volume-by-Price is best suited for identifying present or future support and resistance. The indicator marks potential support when prices are above a long bar and potential resistance when prices are below a long bar.