Special Purchase Systems & Online Purchasing

Forward Purchase

- In a forward purchase transaction, a buyer and seller enter into a purchase and sale agreement at a set or calculated price for an asset that is either in pre-development or under development but not yet complete.

- Example: real estate

- A forward purchase transaction can be attractive to both buyers and sellers. Among other advantages, a buyer can avoid a bidding and marketing process that would typically accompany a completed or stabilized asset and may also obtain greater insight into the physical characteristics of the project during the development period.
- A seller, on the other hand, might shorten its hold period, realize its gains sooner, increase its rate of return on invested capital and potentially use the certainty of exit to obtain more favorable construction financing. Although a forward purchase is not a new transaction structure, increasingly, forward purchases are a component of REIT share sales and opportunity zone transactions.

- The forward purchase agreement includes complexities not typically found in a sale of a commercial asset. Most importantly, the agreement must contemplate the expectations of buyer and seller for the completion of the asset. In addition, given that development projects often require certain changes that cannot be anticipated, the purchase agreement should retain appropriate flexibility that enables the seller to complete the project (and satisfy the conditions precedent to closing) yet provide sufficient monitoring by the buyer over the development period.

- A buyer often requests inspection, monitoring and/or approval rights over various aspects of the project, such as material changes to the plans and specifications or changes to project approvals. In certain situations, either the buyer or seller (or both) may retain rights to require changes to the plans at their cost, particularly in connection with tenant requirements. The seller must balance these rights against the rights that may be provided to other third parties, such as lenders (through completion guarantees), partners (through joint venture agreements), contractors (through general contracts) and other third parties. For these reasons and others, a seller may be hesitant to add an additional approval of the buyer for anything other than major changes. Further, the seller would likely want to maintain its existing relationships to the greatest extent possible and to avoid conflict with a new representative of buyer. The forward purchase agreement must balance the buyer's rights for information with the seller's need for operational flexibility and certainty of closing.

Purchase Tender

- A Purchase Tender (PT), also known as Call for Bids, is used to drive competition between several suppliers in order to get the best offer for a list of products. In comparison to the RfQ, a Purchase Tender is sent to multiple suppliers, stating each are competing with one another, and that the best offer will win. The main interest is that it usually leads to better offers.

- A Purchase Tender is used for public offers that require an open offering from several suppliers. It is also useful when you need to make a one-off order for a product and you would like to get the best offer, no matter which supplier it is. It may be used when your supplier has not been up to your standards and you would like to either push them to deliver a better service, or find a replacement in their competitors.

- Purchase Tenders are a long and tedious process that will likely take more than several weeks in the best cases. If you need a quick delivery, this is not the way to go. Also, if you have a well-established relationship with one supplier, think twice before you initiate a PT with them as it might tear the relationship and finally lead to less interesting deals.

Blanket order

- A Blanket Order is an order from a customer to supply materials for specific items over a period of time at pre-negotiated rates.

- From a blanket order, sales orders can be generated as per the delivery schedule provided by the customer. Blanket orders help customers avoid storing materials in huge quantities while allowing them to take advantage of fixed rates by committing volumes within a specific time period.

Benefits

- Issuing a blanket order allows a customer not to hold more stock than necessary at any time, and avoids the administrative expense of processing frequent purchase orders, while favoring discount pricing through volume commitments or price breaks. On the supplier's side, a blanket order may provide the benefit of guaranteeing ongoing business and also help suppliers better predict future cash flows and orders.
- A blanket order is set at a fixed priced contract for a period of time. The buyer looks for the best pricing among competing supplier bids. After the best one is chosen, the prices of goods are fixed, and also quantities of each product are given to the supplier to prepare stock for on requested delivery.
- Forecasted quantity is provided by the buyer as full usage quantity recorded historically a few years or as needed for quantitative analysis. The supplier may give a condition of quantity to supply for this [contract]. For example, 80% of the forecast quantity must be bought at the end of the contract, which may be one or two years.
- The blanket order will charge the delayed delivery if the supplier could not supply the products in the contract on time. Anyway, since the supplier has already kept the stock for ready delivery for the first year or agreed period, if the buyer could not fulfill the contract's conditions, such as "must buy 80% of forecast quantity within a year," the contract may be extended, or the delay charge could be no more, or no other charges requested by the buyer.
- Realistically, at the end of the blanket order contract, the buyer would not buy at forecasted quantity as agreed in the contract say, 80% of the demand sent to the supplier. The buyer will also allow the supplier to sell the products in the contract to reduce the quantity. The supplier also has to talk and inform the buyer about the quantities of goods kept in order that the buyer could know the status of the stock. Before the buyer issuing the purchase order to the supplier, the buyer must ask the supplier first about stock availability to avoid the problem from no stock availability.
- Blanket orders or call-off orders may also be used for ordering services, for example for maintenance and repair services. In these cases, the benefits associated with stock-holding do not arise but the call-off order may allow emergency repairs or on-call maintenance to be arranged easily at guaranteed rates.

Difficulties

- The most difficult part of having a contract is determining the forecast quantity arranged by the user of the product. As the forecast quantity can be difficult to get, the supplier must be aware of the quantity to keep in stock. An easy way to do this is to discuss with the buyer what quantity to keep in stock. For example, they might keep only 20% in stock in the first 6 months, so that the supplier and the buyer are able to review the quantity and adjust it appropriately. This reduces the stock burden of the supplier during the contract period and might help the buyer at the end of the contract if the stock does not move as quickly as anticipated. The contract might be extended year after year, but it can be adjusted each time as more relevant forecasting history will predicate the need to decrease or increase stock requirements. Alternatively, some companies may utilize forecasted information via a material requirements planning system to determine appropriate stock quantities throughout the product's life cycle.

Zero stock

- Zero inventory is a business strategy where companies aspire to hold little or no on-hand inventory stock. The aim of zero inventory is to order the exact quantity that will be sold, and receipt goods into stock when they are needed.
- Based on the just-in-time inventory approach of short lead times, zero inventory is more effective, flexible and less expensive than holding and storing large amounts of inventory. Stock is effectively pushed back up the supply chain by the retailer who wants to avoid the risks and cost of holding inventory.
- The zero-inventory approach is not feasible for all enterprises but is perfectly suited to many businesses in today's technological environment. Most internet-based retailers operate using the zero-inventory model, particularly for high variety, perishable and fashion-based consumer lines. Allowing companies to maximise cashflow by raising the speed and rate of inventory turns.
- Ultimately, a zero-inventory strategy relies on having an efficient supply chain that is completely reliable.

Zero inventory and the supply chain

- Robust supply chain management is imperative when implementing zero inventory because it places pressure throughout the entire supply channel. To facilitate the fundamentals of zero inventory, the burden of carrying raw materials and inventory is pushed back down the supply chain.

- Suppliers need to perfect their operations and work with flawless efficiency to generate smaller, more frequent production runs. They will need to fulfil orders individually and ship these straight to the customer, which will require some negotiation to agree on minimum quantities.

- It becomes necessary for manufacturers who typically never intended to be involved in the ordering process, to become directly involved with B2C orders. This means having the right technology, proper skillsets and B2C ordering and delivery processes in place.

- Maintaining strong supply chain relationships is vital. Without effective communication and a high level of collaboration, the zero inventory goal will never be reached.

Zero inventory and stock control

- For the zero inventory model to work effectively, goods must be produced and moved based on actual demand or consumption. To ensure all inventory processes are optimised, companies need an inventory management system that provides a holistic view of all the suppliers throughout their supply chain.

- The inventory management software should ensure information is updated instantly across all systems as items sell out. That way, if there are goods that rely on raw materials in production, the item can be suspended on the website or sales platform to ensure customers are not left disappointed.

Zero inventory reality

- It is unlikely that most businesses will truly achieve zero inventory because many will continue to hold some buffer stock for emergencies, late delivery, natural disasters or any risk that threatens customer service. They know that having the right product, in the right place at the right time is the simplest way to increase customer service level satisfaction.

- However, the closer a business can get to achieving zero inventory, the greater the cost savings and benefits such as improved cash flow, reduced carrying costs and inventory waste from maintaining large, unnecessary levels of inventory stock.

price forecasting

- Price forecasting is predicting a commodity/product/service price by evaluating various factors like its characteristics, demand, seasonal trends, other commodities’ prices (i.e. fuel), offers from numerous suppliers, etc.

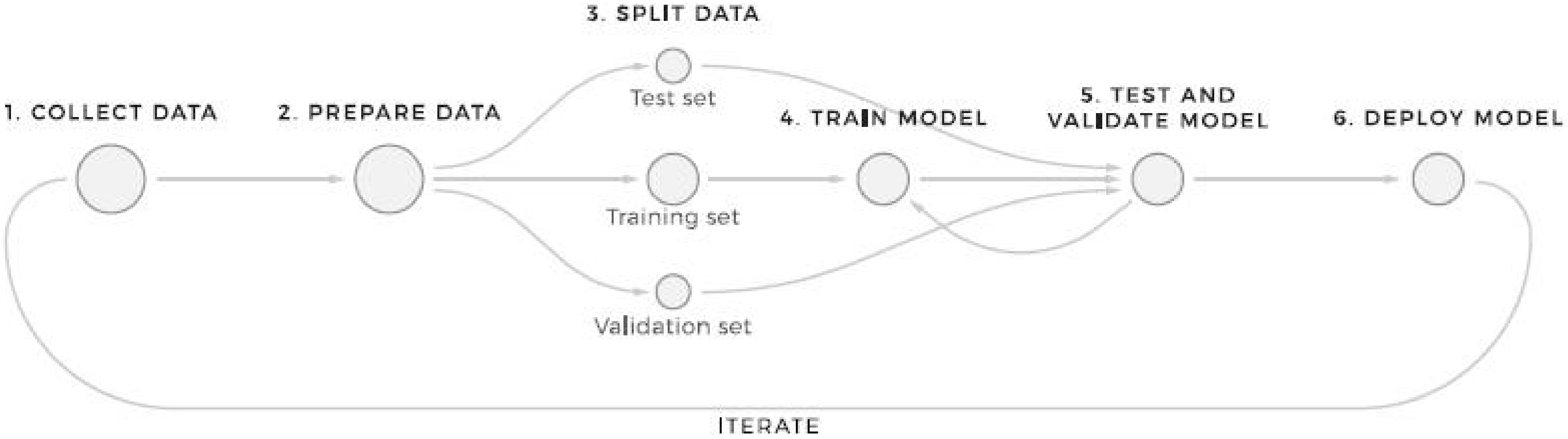
- Price forecasting may be a feature of consumer-facing travel apps, such as Trainline or Hopper, used to increase customer loyalty and engagement. At the same time, other businesses may also use information about future prices. Entrepreneurs may need to define an optimal time to buy a commodity to adjust prices of products or services that require a commodity (lumber, coffee, gold), or evaluate the investment appeal of fixed assets.

- Price prediction can be formulated as a regression task. Regression analysis is a statistical technique used to estimate the relationship between a dependent/target variable (electricity price, flight fare, property price, etc.) and single or multiple independent (interdependent) variables AKA predictors that impact the target variable. Regression analysis also lets researchers determine how much these predictors influence a target variable. In regression, a target variable is always numeric.

- In general, price forecasting is done by the means of descriptive and predictive analytics.

- **Descriptive analytics**. Descriptive analytics rely on statistical methods that include data collection, analysis, interpretation, and presentation of findings. Descriptive analytics allow for transforming raw observations into knowledge one can understand and share. In short, this analytics type helps to answer the question of what happened?

- **Predictive analytics**. Predictive analytics is about analyzing current and historical data to forecast the probability of future events, outcomes, or values in the context of price predictions. Predictive analytics requires numerous statistical techniques, such as data mining (identification of patterns in data) and machine learning.


1. COLLECT DATA
2. PREPARE DATA
3. SPLIT DATA
Test set
Training set
Validation set
4. TRAIN MODEL
5. TEST AND VALIDATE MODEL
6. DEPLOY MODEL
ITERATE

the framework of the price prediction task may look like this

1. Problem statement.
2. Understanding of market peculiarities. Answering the question: What factors impact prices of a commodity/product/service?
3. Data collection, preparation, and preprocessing.
4. Modeling and testing.
5. Deployment of a model into a software system or application.

Electricity price forecasting: the combination of statistical and machine learning techniques

- By the early 1990s, the energy sectors in many countries were fully regulated and monopolized. Government agencies and local bodies were monitoring the work of utility companies, setting their terms of service, pricing, construction plans, ensuring these companies adhered to safety and environmental standards.

- Then a shift towards deregulation began, the main goal of which was to reduce electricity costs and ensure a reliable supply of energy via competition. The power industry started turning into a free market where prices for products and services depend on supply and demand. In other words, the market players trade electricity on exchanges like other commodities. The participants set their bids and offers while trying to maximize their profits. Deregulation is an ongoing process across markets.

Factors affecting electricity demand and price: weather changes, transmission, regulators, fossil fuel prices, and others

- Electricity is a special commodity type, so trading it is a tricky task. It’s non-storable (must be supplied immediately once generated/must be generated and used simultaneously), so a balance between production (generation) and consumption (load) is crucial for energy system stability.

- The demand for electricity and, consequently price, depends on the weather (temperature, precipitation, wind power, etc.) and changes in daily and business activities (weekends and weekdays, on-peak and off-peak hours). Non-storability of electrical energy and continuous shifts in demand lead to electricity price volatility.

- Fossil fuel costs influence the electricity price as well: Fuels are burned to create steam to rotate turbines. Since the electrical power is transmitted from a generator to consumers via transmission and distribution networks, their changing maintenance costs are another influencing factor. Since not all the markets are fully deregulated and some remain under government agency control, public utility or service commissions may introduce rules that can result in changing prices.

Challenges of electricity price forecasting: bidding techniques, data sources, interconnectors, regulations, continuous changes in demand

- Electricity prices fluctuate due to a multitude of factors, including purchasing and selling strategies the power industry players use.
- A variety of bidding techniques that market players employ and the dependency of electricity price on many factors complicate its prediction, thinks data analyst, energy forecasting specialist, and software developer of AleaSoft Energy Forecasting. “The main challenges in energy price forecasting are, on the one hand, the very large number of factors that can affect and alter the price, and on the other, human beings who place the bid and ask offers in the market. So, having very similar external conditions, market offers and final price can be very different.”
- To be able to accurately forecast electricity prices, specialists must understand and take into account all the factors that may influence cost fluctuations and to gather relevant data
- “The challenges are mainly to find the right and updated data sources describing the market and its participants, to follow regulation and interconnector development, and then to understand how these factors dynamically change your modeling.”
- Electricity interconnectors are the physical cables that transfer energy between networks located in different countries facilitating power trade and balancing demand and supply. Interconnectors allow power generators to sell a surplus of energy to consumers that need to meet peak demand during specific time periods (years, seasons, months, days, or particular hours.)

CHALLENGES OF ELECTRICITY PRICE FORECASTING

Numerous bidding techniques	Different players use different purchasing strategies
Interconnectors	Interconnectors transfer energy between different networks
Decisions by regulators	Regulators may introduce rules that impact prices
Continuous changes in demand	There are peak demand and various fluctuations depending on seasons, weather, and other conditions

Travel and hospitality: flight and hotel price predictions for end customers

- Travel and hospitality brands collect and analyze high volumes of data about people’s preferences and online behavior to personalize customer experience. Using price prediction to complement search functionality is another popular way of gaining traveler trust and… increase transactions volume. Kayak and Skyscanner, two large digital players on the travel scene, are leveraging the technique as smaller players also embark on the initiative to add value.

Challenges of flight and hotel price forecasting: undisclosed approaches to revenue management and pricing strategies, no up-to-date information about inventory

- Prices for airline tickets or hotel rooms are as unpredictable as British weather: A price for the same room or seat may change several times in 24 hours. Every accommodation or transport provider is trying to sell as much inventory as possible and at the maximum price.
- Traveler demand for hotels and flights also depends on seasonality, days and parts of a week, holidays or events. Consequently, with fewer reservations, prices go down as transportation, hospitality companies, online travel agencies, and aggregators are striving to motivate customers to press a “book” button. During high demand periods (think the Christmas season or August as popular vacation times for European travelers), prices are skyrocketing.
- Competing for customer attention, the market players monitor each other’s prices, adjusting their price strategies to be ahead of rivals. Not to mention unique approaches to revenue management and pricing strategies.
- So, it’s challenging for data scientists to forecast flight or accommodation prices because they can’t learn about each company’s pricing strategy or up-to-date information about their inventory or real demand for specific dates.

Real estate: predicting property prices for agents, investors, and buyers

- Global real estate investment market keeps growing. According to the latest Real Estate Market Size Report by Morgan Stanley Capital International (MSCI), the market grew by 15 percent, from $7.4 trillion in 2016 to $8.5 trillion in 2017. A multitude of global factors and their interrelationship with each other influences the market, which leads to price fluctuations.

- Factors influencing demand and prices for real estate: economic and political situation, interest rates, climate change, commodity prices

- **Economic health.** Real estate price correlates with the overall health of an economy. Such economic indicators as the gross domestic product (GDP), manufacturing activity, the consumer price index (CPI), employment and unemployment rates are used to evaluate the state of the economy. For instance, in areas or countries with rising unemployment rates, purchasing power falls, as do property values.
- **Interest rates**. Since many entrepreneurs and consumers can’t pay upfront for a property, mortgage/interest rates area a major influence on prices for these assets. When interest rates drop, purchase power increases. A growing demand for real estate then puts upward pressure on prices.
- It’s worth mentioning the US housing bubble of 2007 in this context. Because of very low interest rates, affordable credit, and speculation, demand and prices skyrocketed. Eventually, demand started decreasing while supply continued to grow, and prices plummeted. From 2007 to mid-2010, housing prices dropped more than 30 percent.
- **Political turmoil**. Political instability is another factor that makes foreign and international investors hesitate purchasing these fixed assets. As a result, sellers must drop prices. For instance, house prices in London decreased 0.7 percent from the beginning of 2018 to June 2018 due to uncertainties connected with Brexit. At the same time, the situation may be different in other parts of the UK. Real estate values across the UK continued to grow: Prices for homes in Scotland increased by 4.8 percent.

price negotiations and fixing

8 Pointers for Setting a Price in Negotiations

1. Don’t go below your reservation price.

- The reservation price is the price at which the seller becomes indifferent about doing the deal.
- Perhaps it’s the break-even price or the point when the profit margin shrinks to a an undesirable level. Determine your reservation price. Never go below it.

2. Focus on value.

- Direct your discussion with the customer to be on the value delivered, rather than the price.
- If the conversation is only about price, the low bid will win. Instead, point out the things that make your offering different and better. Focus on the value of those benefits. Make the discussion about why your product or service is worth paying a premium.

3. Don’t negotiate with yourself.

- You’ve proposed a price. Then you're asked, "Can you do better?"
- Let's say you respond with a price 10 percent lower. If you’re the only one putting offers on the table, you’re negotiating with with yourself.
- Instead, respond by saying, "What would it take to close the deal right now?" That way you’re asking for a counter offer. This sets a floor for the negotiation.
- Respond to that counter by saying, "I can’t do that, but I can meet you part of the way." Instead of just lowering your price and profit margin, you’re meeting the customer in the space between your ask and his or her offer.

4. Justify the price.

If you simply propose a number, it might seem arbitrary. And sure, you could offer a lower price and you may have to do so. But people are much more comfortable with a price when there's a rationale.

You might say, "Look: You want a fair price. I know you can understand that I need a fair profit. This price is fair for both of us."

Additionally, you can point to the benefits your profit provides and explain that they justify your asking price.

5. Claw back money in other areas.

In many industries, customers make a buying decision on the purchase price, but don’t pay much attention to other associated costs. Airlines have learned to offer low-ticket prices because that’s how cost-conscious consumers make their buying decisions.

Airlines then claw back money by charging for checked bags, seat upgrades, early-boarding privileges, entrance to their club, cancelation and change fees and snacks. Yes, it can be annoying to the customer but this works for the airlines. If it didn’t, airlines would probably change their policies.

Think about other ways to extract value from a deal, if you kept your price low.

6. Reduce the cost of doing business.

- Don’t let a maniacal focus on the price blind you to other ways of creating value.
- We worked with a company that delivered its product on pallets. Its customers then had to pay to dispose of the pallets. When the company changed its practices to retrieve the pallets free of charge, the customers thereby saved on disposal costs. Our client increased its profit by reusing the pallets. It was a win-win.

7. Discount the next purchase.

- If an oil change costs $29.99, the mechanic shop can reduce the perceived price to $19.99 by offering a $10 discount coupon for the next oil change.
- When it’s time for the next oil change, the customer will calculate that with the coupon, the cost will be only $19.99. Thus the mechanic appears to have offered a $10 discount for both oil changes.

8. Figure in the expiration date.

- If prepaid coupons are offered with an expiration date, many will go unused. While the coupon may offer a $10 discount, on average it won’t cost the merchant $10.

Rate contract

- A rate contract is usually attempted when a global sourcing effort is not feasible, due to financial or operational constraints. A rate contract is also typically established in inputs where the number of suppliers is large (where it is not a monopoly or an oligopoly).

- Rate contracts can be arranged at various levels by a large firm - in specific geography markets or at a national level or at a global level (if suppliers exist at differing scales) and in specific sub-categories, or in a range of sub-categories, or for a category, or for a related categories. The rate contract can also be established for a year or for multiple-years. The level of the rate contract agreed depends on:

1. The level of standardization of the input
2. The predictability of procurement spend
3. The nature of the supplier market
4. The pricing power of the procurer as against the supplier.

Process of setup

- The process of setting up a rate contract in a category follows a set of standard steps:-

1. Procurement spend analysis: Identification of cumulative spend, identification of key suppliers and their share of business, identification of average price of procurement, spend growth projections
2. Market analysis: Study of the nature of the market, exhaustive identification of suppliers and their capabilities, study of supplier cost structures. One of the primary objectives of this step is the identification and introduction of new suppliers
3. Supplier Interactions: Selection of a fit-list of suppliers, invitation to suppliers for discussions, supplier discussions and interactions, RFQ to selected suppliers
4. Receipt of Quotes from suppliers
5. Selection of a fit list of suppliers
6. Agreement on the points of the rate contract and finalization of the rate contract

- Post the setup of a rate contract, a definitive monitoring mechanism must be set up. Such a monitoring mechanism needs to be done centrally by the organization and involves - monitoring of offtake by supplier, monitoring of non-RC offtake and monitoring of supplies and periodic quality audits. Without the setup of a monitoring mechanism, much of the effectiveness and purpose for a setup might be lost.

What is the difference between rate contract and running contract?

- A rate contract is essentially related to a fixed rate. Thus, within the period of currency of the contract, the contractor has to supply material (irrespective of quantity) at a fixed rate.
- In running contract, the essence is supply of quantity of material within a given period by the contractor as and when ordered
- Under Indian Railways Accounts code, paras 407 & 408 deals with rate and running contracts. The paras are extracted below.
- 407. Rate Contracts: The Rate Contract is a contract under which, during the period of its currency, the contractor engages to supply materials on demand, irrespective of quantity, at fixed unit rates or prices, within a given period of the receipt of such demand.
- 408. Running Contracts : The Running Contract is one under which, during the period of its currency the contractor engages to supply, and the other party to the contract to take, a specified quantity (with a percentage tolerance either way) of materials, as and when ordered, at fixed unit rates or prices, within a given period of the receipt of such order.
- Note: The "Rate" and "Running" forms of contract are primarily intended for application to "Stores" contracts.