

Study sheet: Module 14, the auction business model

This session extends Module 7 by turning from the art market itself to the business that runs it: the auction house. An auction house is a two-sided intermediary, paid by both the seller who consigns a lot and the buyer who wins it, and its health as a business is only partly visible in any single sale. Students learn the two revenue streams that fund a saleroom, the mechanics that shift risk between house, seller, and buyer before a single hammer falls, and the competitive reality that the real contest among houses happens before the sale, in winning good consignments, not during it. The session then returns to the documented fields already familiar from Module 7, `usd_price_decimal`, `sale_estimates_high_usd_price`, `status`, and `vendor`, to build the two measures a business analyst can actually compute from public auction records: how well a house's estimates track what buyers pay, and how concentrated or spread out a house's revenue is across its lots. The session builds toward a single question: what does it take to run a profitable saleroom, and what can transaction data tell an outside analyst about whether a given house is succeeding at it.

What you should be able to do

1. Explain the auction house's role as a two-sided intermediary and describe the buyer's premium and the seller's commission as the two revenue streams that fund the business.
2. Describe how a pre-sale estimate is set, why estimate accuracy matters commercially to a house, and compute the ratio of realized price to high estimate from documented fields.
3. Explain guarantees and irrevocable bids as mechanisms that shift financial risk between house, consignor, and a third-party guarantor, and how each changes the incentives around a sale.
4. Compute average lot value by house and contrast it with lot volume, and explain why these describe two different kinds of auction businesses.
5. Measure value concentration among a house's top lots and explain why a single lot or a single consignor can dominate a season's results.
6. Identify the limits of auction data for studying the auction business itself, including that it captures the secondary market only, that no field records buyer's premium, hammer price, or commission, and that the newest periods are still being ingested and should not be read as trends.
7. (Extension) Retrieve one house's sold lots programmatically via the production API and compute estimate accuracy or average lot value client-side after paginating the results.

Key terms

- **Buyer's premium:** the fee a winning bidder pays on top of the hammer price, one of the two revenue streams that fund an auction house. Not present as a field in the data.
- **Seller's commission:** the fee a house deducts from the proceeds paid to a consignor, the second of the two revenue streams. Not present as a field in the data.
- **Pre-sale estimate:** the auction house's own published price range for a lot before the sale, recorded here only at its high end, in `sale_estimates_high_usd_price`.
- **Estimate accuracy:** the ratio of realized price to the high estimate across sold lots, a measure of how closely a house's pre-sale expectation tracked what buyers actually paid.
- **Guarantee:** a house's or a third party's promise to pay a consignor a minimum price for a lot regardless of the room's bidding, which removes the consignor's downside risk before the sale.

- **Irrevocable bid:** a commitment from a third party to buy a lot at a set price if no higher bid emerges, functioning as a form of guarantee negotiated ahead of the sale.
- **Private sale:** a sale negotiated directly between a house and a buyer outside the public auction room, a second channel alongside public auction that this dataset does not capture.
- **Consignment pipeline:** the ongoing process by which a house sources lots from sellers, widely considered the real point of competition among houses rather than the sale night itself.
- **Average lot value:** total realized value divided by the count of sold lots for a house, distinguishing a business built on a few expensive lots from one built on high volume.
- **Value concentration:** the share of a house's or a season's total realized value that comes from a small number of top lots or top consignors.

Core sandbox query

The query the module is built around. Run it, then change the brand or category and compare.

```
SELECT vendor,
       approx_percentile(usd_price_decimal / sale_estimates_high_usd_price, 0.5) AS estimate_accuracy,
       COUNT(*) AS sold_lots
FROM all_fine_art_data
WHERE status = 'sold'
      AND sale_estimates_high_usd_price > 0
      AND vendor LIKE '%Christie%'
GROUP BY vendor;
```

Common mistakes to avoid

1. Writing or expecting a query that computes buyer's premium, hammer price, commission, or a guarantee amount directly from the data. No such field exists on the fine art table, and `usd_price_decimal` is the realized price the buyer paid, not a component fee.
2. Computing estimate accuracy without the `sale_estimates_high_usd_price > 0` guard, letting zero or null estimates distort the ratio.
3. Treating a high average lot value alone as evidence of a stronger business than a high-volume house, without considering how concentrated that value is among a few lots.
4. Reading a season dominated by one exceptional lot as the house's normal, ongoing level of business, rather than checking whether that concentration repeats across seasons.
5. Reading the newest quarter's totals as evidence of a rising or falling trend, when the newest periods are still being ingested.
6. Carrying the fine art table's designer-equals-artist, vendor-equals-auction-house convention into another table, where designer and vendor mean something different.
7. Ranking a house on too few sold lots, producing an estimate accuracy or concentration figure too noisy to support a real business conclusion.

Full lesson, more queries, and the homework are in Module 14 at academy.altfndata.com. Questions: info@altfndata.com.