

# **Gold ETF Analysis for Entry**

**Dollar Cost Averaging VS Using a Signal**

*( GLD 2025: Time vs Timing)*

**Presented by Divya Kalavar.**

# Investment Experiment : Time vs Timing

Gold has often been the safe haven asset for most investors in the times of uncertainty but the way people choose to enter the markets can look different. **GLD (Gold Traded ETF)** is simple and highly liquid making it a good test case to compare different approaches.

- **Dollar Cost Averaging (DCA)** : The focus is staying in the market for long periods of time while ignoring price entry.
- Time and **Entry in the Market (SMA - Simple Moving Averages)**: Combine long term investment in the market with active timing based on Market Signals.

I have compared these 2 approaches using the examples of **Sara and Anna's portfolio**. Both want to invest **\$7000** into GLD.

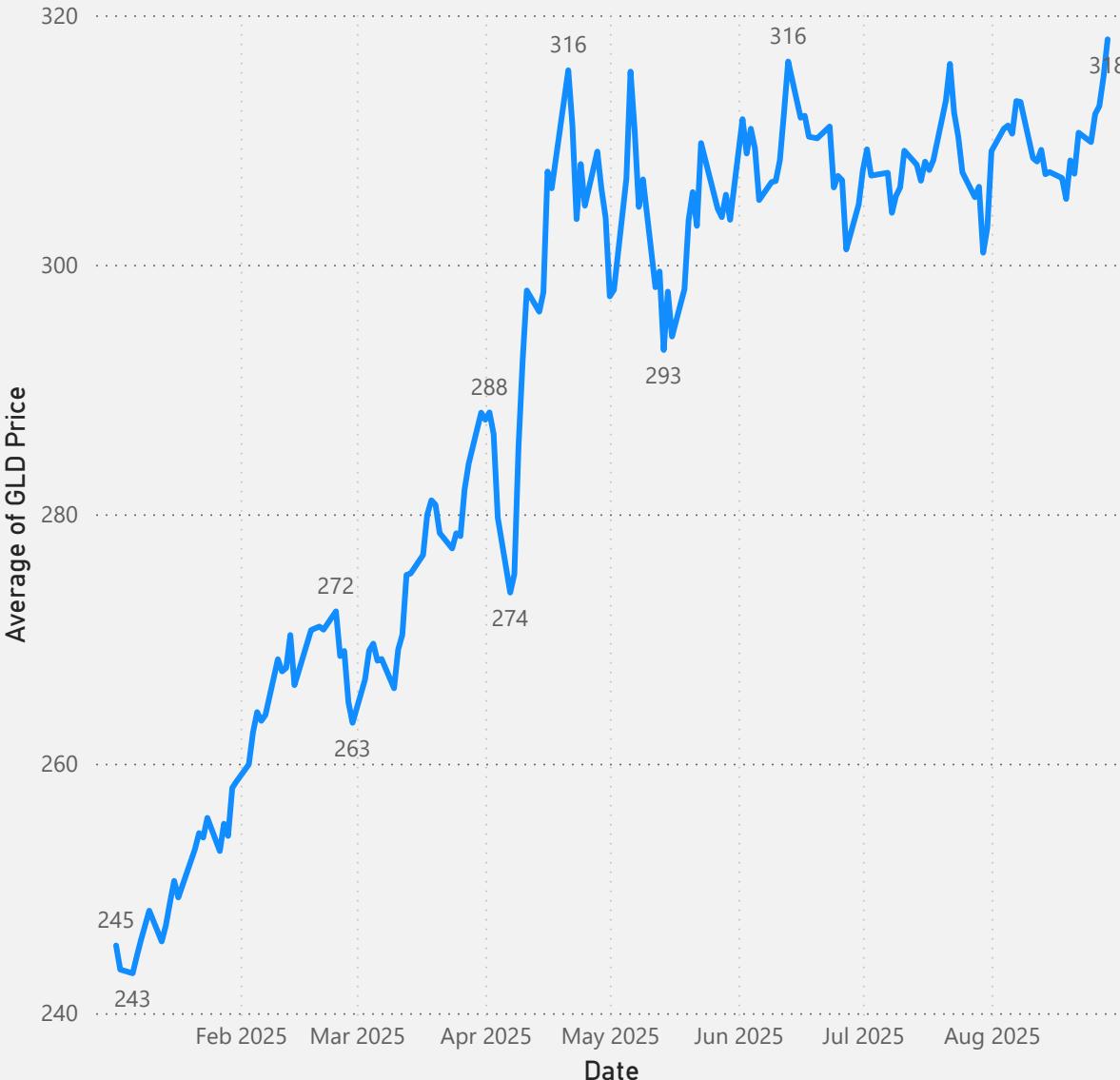
- **Sara** believes in "Time in the Market" (**DCA**) : Starting Jan 2025 she invests \$1000 on the 1st trading day of the month until her budget is exhausted.
- **Anna** believes "**Time and Entry in the Market**" : She uses a **20-day SMA vs 50-day SMA** crossover rule. Starting Jan 2025, she invests up to \$1,000 per trade, no more than two trades per month, only when the 20 SMA is above the 50 SMA.

At the end, we'll compare their results to see which approach — **steady patience (time in the market) or tactical timing (SMA) — works better with GLD.**

# Price Trend for GLD from Jan 2025 to Aug 2025

GLD has steadily climbed from \$243 at the beginning of January to \$318 at the end of August. A 31% increase showing a steady uptrend but also some price volatility.

Line Chart



Candlestick Chart

**Jan 2025 - Aug 2025 GLD Price Candlestick chart**

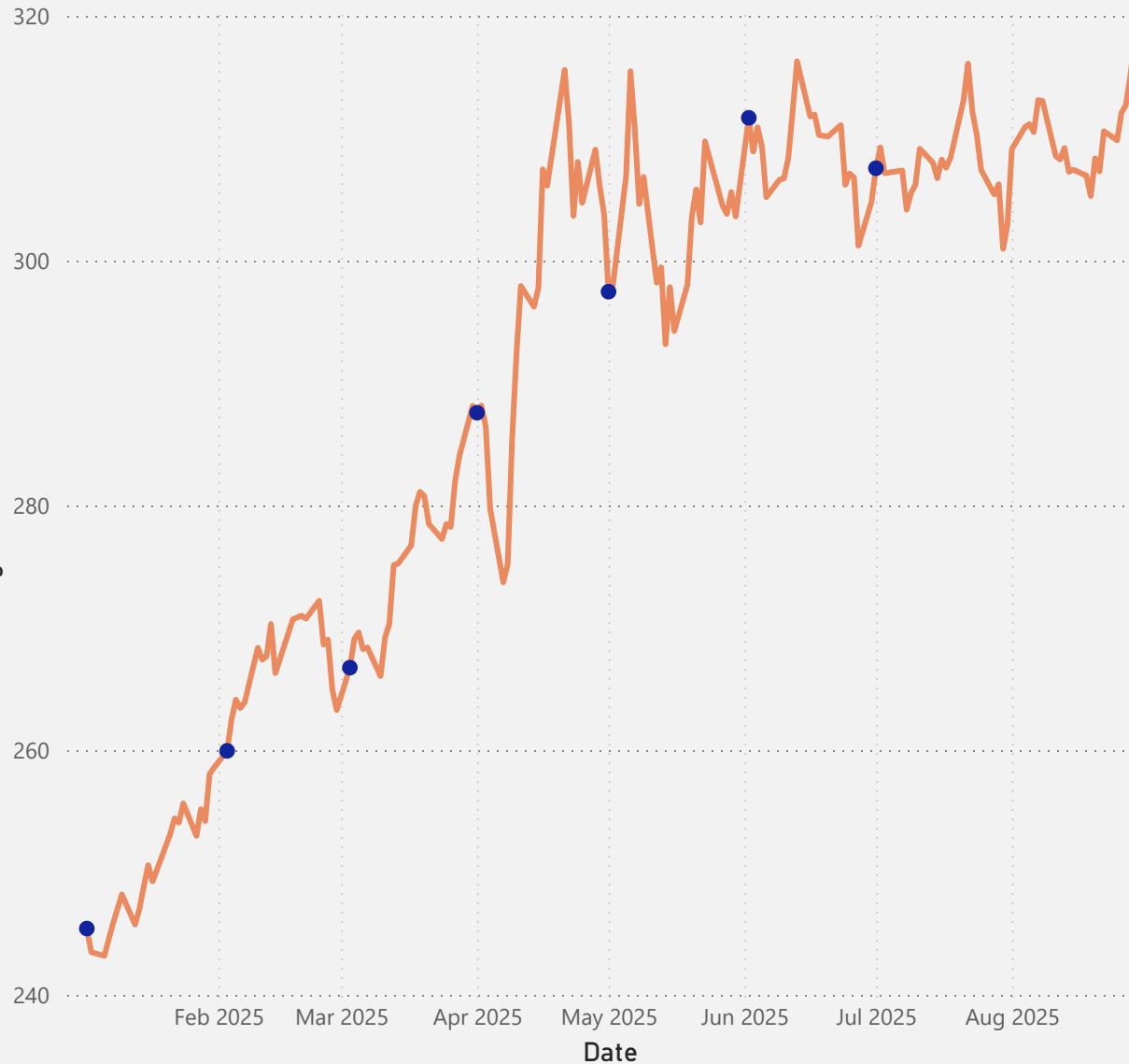


# Sara's Dollar Cost Averaging Strategy

Sara by July has exhausted her budget and the chart shows her entry points (marked in blue dots) spread out over both lower and higher prices.

Dollar Cost Averaging Trades

● Average of GLD Price ● Average of DCA Price



Trades bought on the **1st trading day of each month** (\$1000/trade) with a max budget of \$7000

DCA Summary for Shares Bought and Price

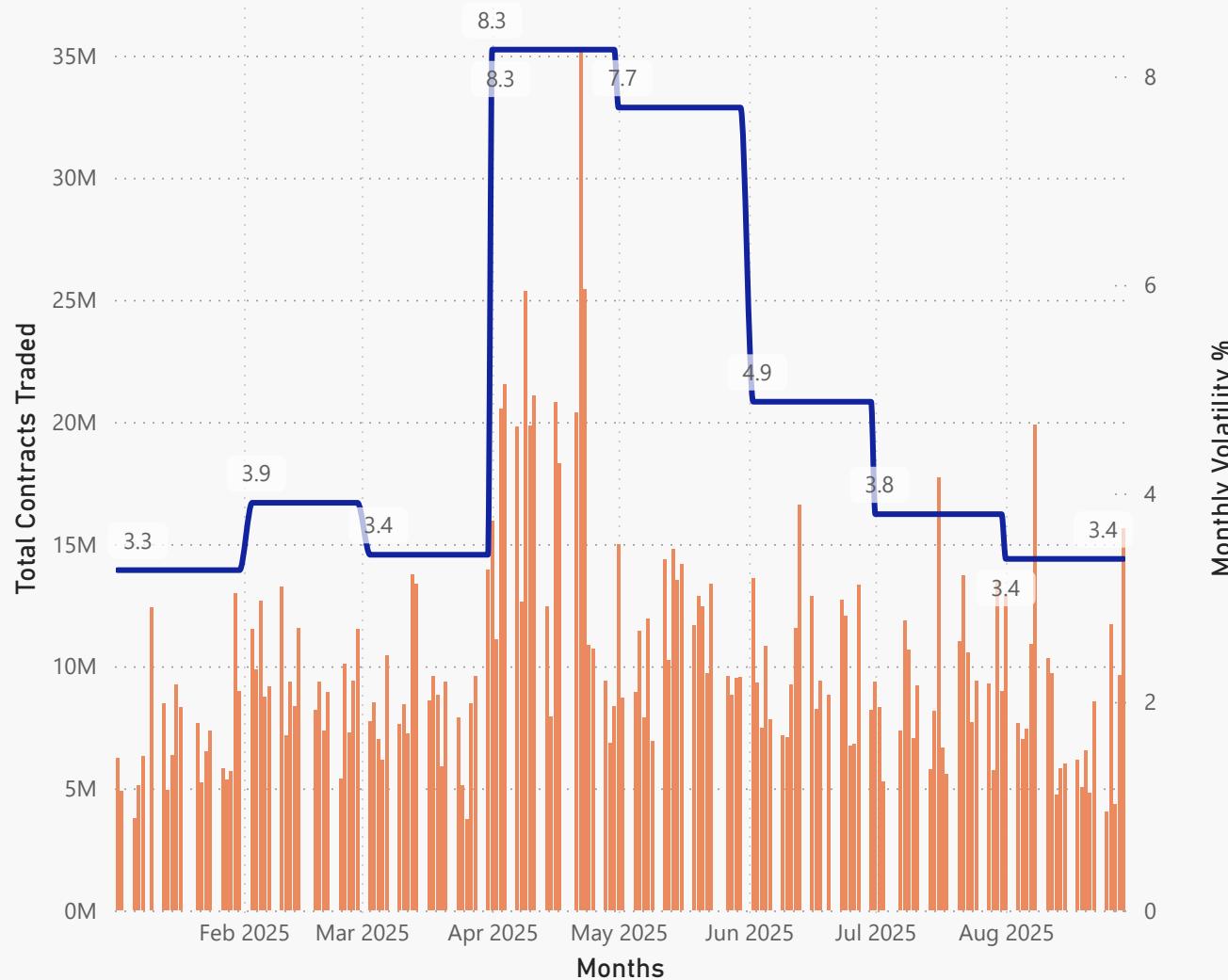
Date	Monthly Budget	Avg Price	Shares Bought
1/2/2025 12:00:00 AM	1000	245.42	4.07
2/3/2025 12:00:00 AM	1000	259.94	3.85
3/3/2025 12:00:00 AM	1000	266.74	3.75
4/1/2025 12:00:00 AM	1000	287.57	3.48
5/1/2025 12:00:00 AM	1000	297.46	3.36
6/2/2025 12:00:00 AM	1000	311.67	3.21
7/1/2025 12:00:00 AM	1000	307.55	3.25
<b>Total</b>	<b>7000</b>	<b>282.34</b>	<b>24.97</b>

# MONTHLY VOLUME and VOLATILITY

The chart shows trading volume and volatility (price swings in percentages) shifted month by month in 2025 with sharp spikes in April and May before calming down.

Volume of Contracts Traded and Monthly Volatility

● Sum of Volume ● Monthly Volatility %



Volatility

For **Anna**, volatility matters because her SMA crossover strategy depends on price swings: high volatility creates more trade signals, while low volatility means fewer, steadier signals.

- **Volatility** = how much prices swing up and down.
- **High volatility** = like a **roller coaster with steep drops and sharp turns** → exciting but risky.
- **Low volatility** = like a **gentle kiddie ride** → smoother, steadier, less risk.

# SIGNAL EXPLANATION

Overlaid on GLD's daily price movement are the **20-day SMA (orange)** and **50-day SMA (purple)**

## GLD Signal Indicator

**Jan 2025- Aug -2025 GLD prices with 20-SMA (ORANGE) & 50-SMA (PURPLE)**



## 20 SMA vs 50 SMA

SMA : Simple Moving Average.

**20 day- SMA**(1 month trading data) = Faster, moves quickly to price changes

**50 day SMA** (3 month trading data) = Slower, shows broader trend

Signal:

- **20-SMA crosses ABOVE the 50-SMA** ----- Indicates short term **bullish** sentiment, **buy** signal.
- **20-SMA crosses BELOW the 50 SMA** ----- Indicates momentum is turning **bearish**, hence **pause buying**.

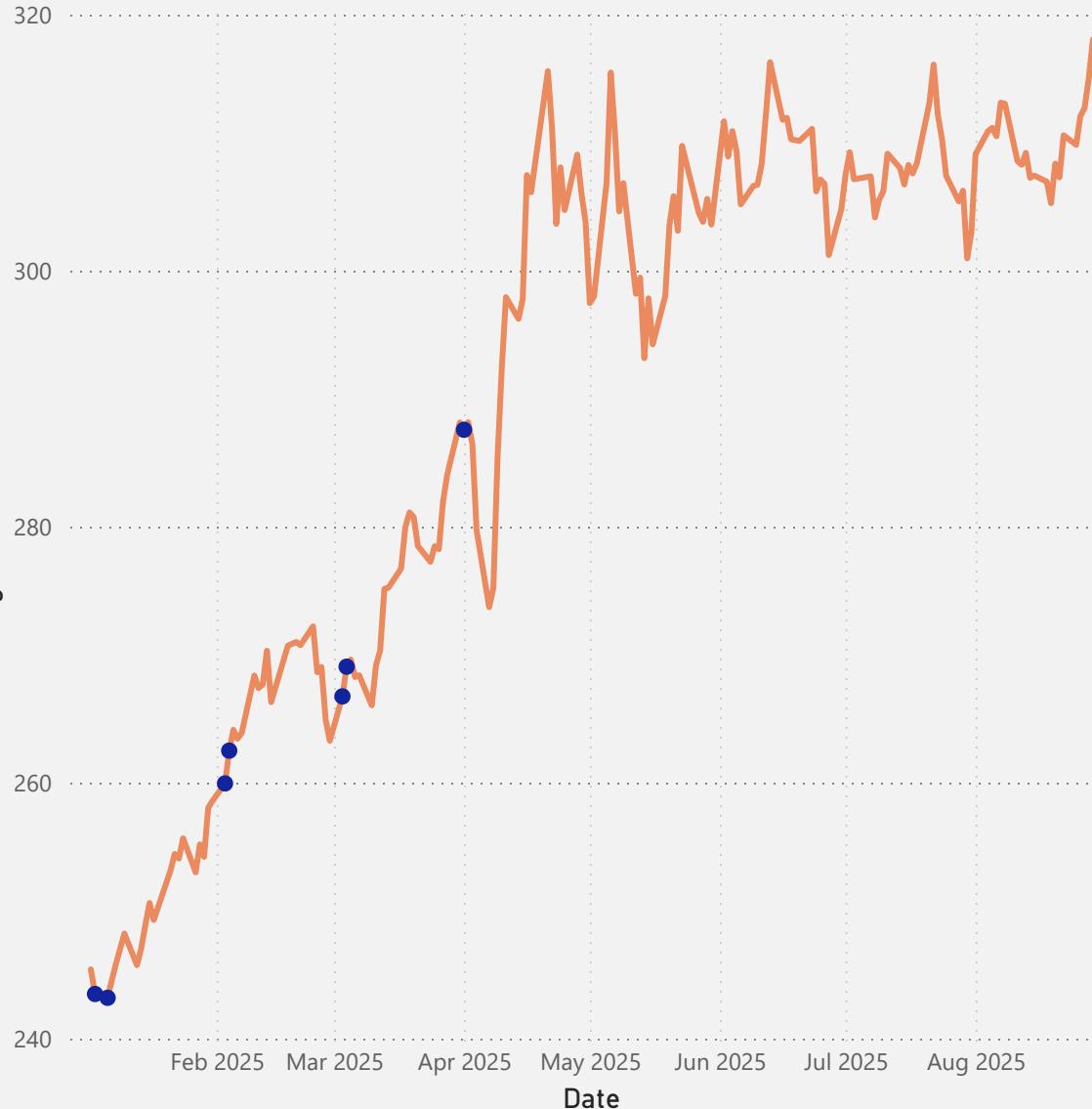
This combination of SMA's can be used to spot early trends to create a buy/hold/sell signal for the portfolio.

# Anna's Portfolio Using Signal

Anna by April has exhausted her budget and the chart shows her entry points (marked in blue dots).

## Dollar Cost Averaging Trades

● Average of GLD Price ● Average of Signal Price



Anna uses a 20-day SMA vs 50-day SMA crossover rule. Starting Jan 2025, she invests up to **\$1,000** per trade, no more than **2 trades per month**, only when the **20 SMA is above the 50 SMA**.

## Signal Summary for Shares Bought and Price

Date	Amount per Trade	Average of Signal Price	Sum of Shares
1/3/2025 12:00:00 AM	1000	243.49	4.11
1/6/2025 12:00:00 AM	1000	243.19	4.11
2/3/2025 12:00:00 AM	1000	259.94	3.85
2/4/2025 12:00:00 AM	1000	262.50	3.81
3/3/2025 12:00:00 AM	1000	266.74	3.75
3/4/2025 12:00:00 AM	1000	269.06	3.72
4/1/2025 12:00:00 AM	1000	287.57	3.48
<b>Total</b>	<b>7000</b>	<b>261.78</b>	<b>26.82</b>

## Portfolio Comparisons for Both Approaches

Anna's approach gave her 8.4% (\$588) more in ROI and an extra 1.85 GLD shares compared to Sara.

### Portfolio Using Signal

Signal Total Contribution	\$7,000.00
Signal Total Shares	26.82
Signal Ending Value	\$8,530.18
Signal PNL	\$1,530.18
Signal ROI	21.86%
Signal Avg Price	261.01

### Portfolio Using DCA

DCA Total Contribution	\$7,000.00
DCA Total Shares	24.97
DCA Ending Value	\$7,942.17
DCA PNL	\$942.17
DCA ROI	13.46%
DCA Avg Price	280.34

Even a simple buy rule improves entry timing—lowering average cost, adding more shares, and boosting ROI. Small gains like this compound over time.

## Conclusion

- Expand this back test for 5-10 years.
- Test under different market conditions eg. Bull, Bear and Sideways Trends.
- Explore nearby windows like the 10/50 or the 20/100 while varying the 2 buys/month rule
- We must have an exit strategy for what to do when the Signal crosses over.
- Explore adding other signals like candlestick patterns, Bollinger bands, RSI
- Compare results on different assets like equities, silver