IQIC - Markets & Returns

#5: Understanding Drawdown

What is Drawdown?

- **Definition:** A drawdown measures how far a portfolio has declined from its most recent peak value.

Formula: Drawdown = [(Current Value - Previous Peak) / Previous Peak] * 100

Example: Suppose a portfolio grows and then declines

$10,000 → $12,000 → $11,400 → $10,800

Drawdown = [(10800 - 12000 / 12000] * 100 = **- 10%**

Portfolio experiences a **10% drawdown**

Maximum Drawdown

- **Definition: Maximum drawdown is the largest high-to-low decline experienced by a portfolio over a given period**

Week	Portfolio Value
1	$10,000
2	$11,000
3	$12,000
4	$11,400
5	$9,600
6	$10,800
7	$12,200

The largest decline was:
$12,000 → $9,600

Max Drawdown = (9,600 - 12,000) / 12,000
= -20%

Why Recovering From Losses Gets Harder

Losses and Gains are NOT symmetrical:

If a $100 portfolio loses 50%: $100 → -50% → $50

To return to $100: $50 → **+100%** → $100

Loss	Gain Needed to Recover
-10%	+11.1%
-20%	+25.0%
-30%	+42.9%
-50%	+100.0%

Same Return, Different Risk

Return doesn't tell us the whole story

Ex: Two portfolios both start at $10,000 and finish at $11,000

	Portfolio A	Portfolio B
Total Return	+10%	+10%
Max Drawdown	-5%	-30%

What does this tell us?: Both earned the same return, but Portfolio B experienced much greater downside risk

Additional Resources

1. **CFI - Drawdown:** Drawdown article
   a. A beginner-friendly article by Corporate Finance Institute explaining drawdown, its calculation, and how to interpret portfolio declines
2. **CFI - Calmar Ratio:** Calmar Ratio Article
   a. A short article by corporate finance institute explaining how returns and maximum drawdown can be combined to evaluate risk-adjusted performance