



WIN NEW CLIENTS & INCREASE WALLET-SHARE with HiddenLevers

Engaging prospects + clients with portfolio stress testing



hidden

levers


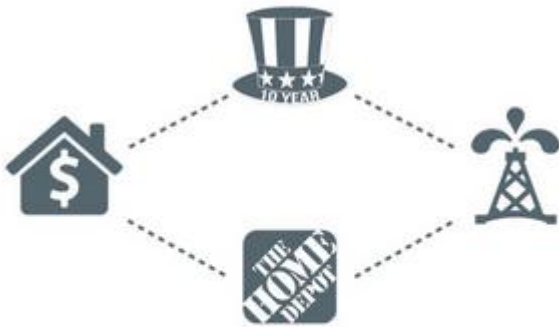
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Additional Resources

You can always visit help.hiddenlevers.com to read articles and watch educational videos.

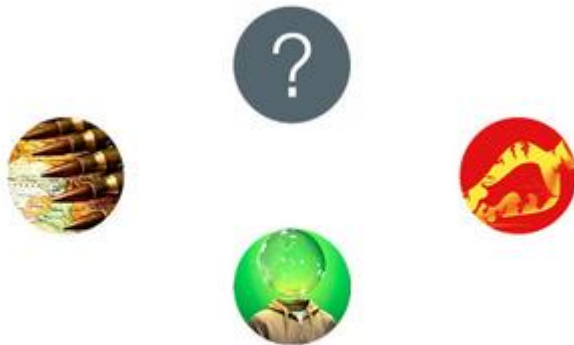
HOW IT WORKS



1. Find the Connections

STEP 1

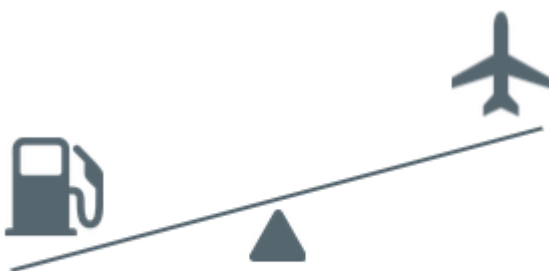
HiddenLevers uses big data to measure millions of relationships between the economy and investments. Interest rates affect home sales and oil prices, which impact the price of Home Depot stock. We uncover these links for 35,000+ investments.



2. Ask the Big What-ifs

STEP 2

HiddenLevers' research team creates scenarios to model recessions, crises, and other economic events, using historical research and analysis on how economic indicators are correlated.



3. Model the Impacts

STEP 3

In a stress test, investment performance is projected using the relationships measured in step 1, applied to the scenario assumptions in step 2. If a scenario forecasts oil to fall, and American Airlines is inversely correlated with oil, then American Airlines will rise in that scenario.

Common Objections

How does this work?

In addition to knowing the “How it Works” infographic from page 3 of this manual, there are relatable stories to explain the technology. The first part of HiddenLevers is the multi-factor regression model. This is a fancy way of saying HiddenLevers measures the relationship between the economy and investments. Take oil prices and airline stocks for example. When oil prices fall, some airline stocks will rise because of their dependence on oil and its lower cost. After many market closes, we are able to determine a trend pattern. So, a 1% drop in oil might move an airline up by .5%. The HiddenLevers algorithm runs millions of calculations every night to update the relationships that exist between the economy and investments. Once we know these relationships, we can ask questions like “What will happen to my portfolio of airline and oil stocks if oil prices rise by \$15?”

How can I trust these numbers?

Let’s use a story that clients/prospects can relate to. When Volvo sends a sedan to a crash test facility, it stress tests the car in a controlled environment. By throwing the car at a brick wall at 50 mph, one can see how the car crumples and dummy moves. In real life the same crash won’t play out exactly the same way. Road conditions, weather, and driver input will cause the actual impact to happen differently than in the controlled test environment. However, this doesn’t mean the controlled crash test is worthless. It is still a significant insight into the average result that can be expected. Portfolio stress testing is similar by revealing how a real world brick wall will impact a portfolio; this conveys the overall volatility in a portfolio. Each stress test report outcome is run 2500 times to determine a 95% confidence interval. Also, a recent model performance review revealed over 84% accuracy in HiddenLevers stress test results. See the news release on Yahoo! Finance at <http://yhoo.it/1A4p0rt>

How to answer technical questions:

“As your advisor, you can think of me as a primary care physician with a broad base of knowledge. HiddenLevers is my neuroscientist that I refer you to for deep economic analysis. I then share with you their findings.”

“Our firm uses HiddenLevers as an independent economic risk management tool. We have vetted their method and the results are objective mathematical calculations.”

Then, feel free to jot down any questions for us to answer for you.

THE FIVE PART METHOD TO USING HIDDENLEVERS

ONE: Introduce and position risk at the first meeting.

HiddenLevers is designed to fit within your current sales process. Although a new technology, it's simple to get results fast. It's an intuitive, interactive, forward-looking, scenario-based analysis tool.

Important: Keep your current sales process.

After you determine the client's risk tolerance and obtain their statement, let them know about this great educational experience that will reveal things about their portfolio they've never seen before.

As soon as possible, start discussing what events or situations the prospect worries will affect their investments. The goal is to find out which economic trends or world events keep the prospect up at night. These scenarios will be brought to life in HiddenLevers. For example:



“Would you like to see how your portfolio would fare in another 2008?”

“The world is a tumultuous place. What global events concern you?”

“Has anyone discussed how world events might affect your portfolio?”

“What are some economic and political risks to your investments?”

“Oil prices, inflation, the US dollar... would you like to see the impact of these and other factors on your portfolio?”

End Step 1 by positioning the next meeting – ensuring they look forward to it.

“Mr. and Mrs. Jones, one way for us to analyze your portfolio is to use a ‘Stress Test.’ This process allows us to find out how your portfolio might react to real-world situations. After listening to your worries here today, I look forward to discussing how these concerns may impact your investments.”

“The largest industries use stress test analysis to protect themselves, shouldn’t we do the same for your portfolio? Cars go through crash testing, airlines use flight simulators, and banks use stress testing. We’ll do the same for your portfolio.”

“Up until recently, the investment industry has focused on past performance. This past focus is akin to only using your rear view mirror when driving. Our modeling focuses on the future by measuring how your portfolio reacts to different environments. This is like a foggy windshield. It’s not absolutely clear, but better than looking behind you. We’ll explore what may lie ahead for your investments if we come across the worries you mentioned.”

Finish this discussion with the question:

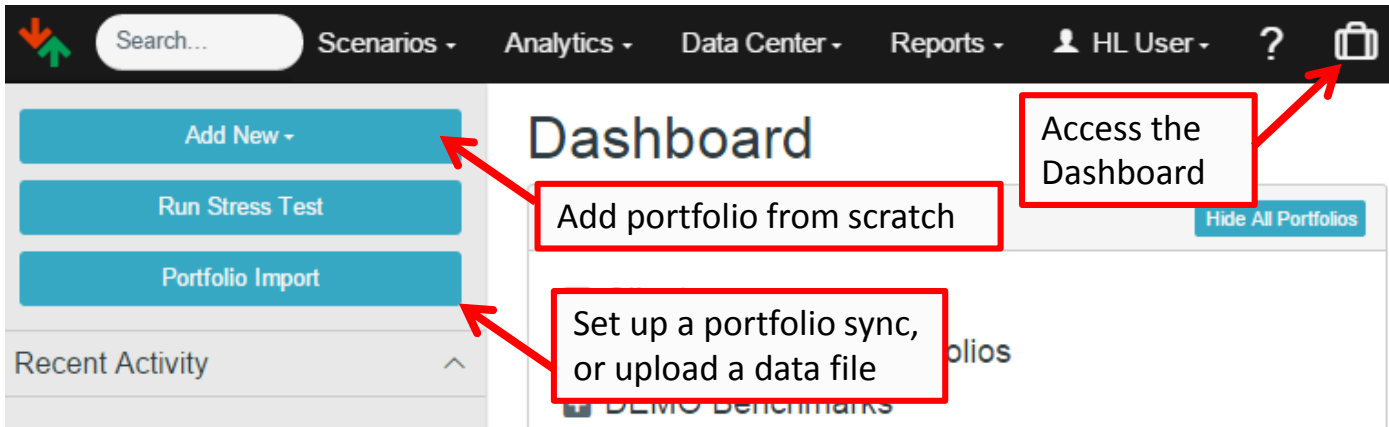
“HOW MUCH ARE YOU WILLING TO LOSE?”

Calculate their total investible assets and find out how much the client is willing to lose – in dollars. This number will become key when looking at how much stress testing says they may lose versus what they’re comfortable with. It will be the first step to aligning their investments and risk tolerance.

TWO: Enter holdings into HiddenLevers.

There are two ways to accomplish this. Portfolio import or manual entry.

The first option is to use one of our many integration partners to sync data or upload files into HiddenLevers. To do this, go to your dashboard which can be accessed by clicking the briefcase icon and then clicking the “Portfolio Import” button in the left-hand navigation.



Our quick manual entry works as follows:

1. Go to your dashboard, then click “Add New” and then “portfolio”.
2. Name it, select a type (share quantity, dollar-value, etc.), & the loss tolerance (as a percent).
3. The holdings can be typed in, or pasted from an excel sheet.

A screenshot of the manual entry form. It includes fields for "Portfolio:", "Type:" (set to "Share Quantity"), "Benchmark:" (set to "S&P 500"), and "Loss Tol:". Below these is a table with "Symbol" and "Quantity" columns. A red arrow points from a red box labeled "Type positions or paste from an excel sheet." to the table. To the right of the table is a vertical stack of blue buttons: "Add Cash", "Annuities", "Custom Assets", "Fixed Income", "Multi-Bond Entry", and "Options". A red arrow points from a red box labeled "Add other assets with the blue buttons." to the "Custom Assets" button. At the bottom are "Save" and "Cancel" buttons.

THREE: Stress Test the portfolio.

Once you have your holdings entered into HiddenLevers, you're ready to begin Stress Testing. To get to the Stress Testing screen, click on the "Scenarios" drop-down from the top menu and choose "Stress Testing". Once you are on the Stress Testing page, you'll be prompted to choose a portfolio. After you do that, you can choose a scenario from the "Change Scenario" button or move an economic lever yourself.

The screenshot shows the HiddenLevers Stress Testing interface. The top navigation bar includes a search bar and links for Scenarios, Analytics, Data Center, Reports, and user information. The main header is "Stress Testing". On the left, there are buttons for "Add Portfolio", "Change Scenario", "Hedging Wizard", and "Create Report". A red box highlights the "Change Scenario" button with the text "Choose a scenario". Below this is a section titled "Fed Stress Test 2015" with a slider from 0% to 100% and a piggy bank icon. The main content area is divided into three sections: "Economic Levers", "Key Scenario Levers", and "Portfolio: Jon Smith". The "Economic Levers" section has a "2nd order effects?" checkbox. The "Key Scenario Levers" section has sliders for "10Y UST Yield", "12M T-Bill Yield", and "CPI". A red box highlights the "10Y UST Yield" slider with the text "Adjust assumptions by sliding levers." The "Portfolio: Jon Smith" section shows a table of holdings with their current values and projected impacts. A red box highlights the table with the text "Scenario impact on total portfolio value". Another red box highlights the "Change Scenario" button with the text "Click to see only the portfolio total, edit positions, or remove a portfolio."

Search...

Scenarios - Analytics - Data Center - Reports - HL User - ?

Add Portfolio - Change Scenario

Hedging Wizard Create Report

Fed Stress Test 2015:

Choose a scenario

Click to see only the portfolio total, edit positions, or remove a portfolio.

Adjust assumptions by sliding levers.

Scenario impact on total portfolio value

Stress Testing ?

Economic Levers 2nd order effects? ☒

Portfolio: Jon Smith

Current	Projected
2,001.95	1,950.00
1.86	1.86
0.18	0.22
1.28	0.74

Current	Projected
\$202,824	-49.22%
VEA	-494,736.2
\$204,585	-49.06%
AAPL	-133,059.44
\$199,773	-66.04%
SPY	-133,059.44
\$199,806	-48.7%
ACVIX	-3,580.77

What if the economy falls into a deep recession as modeled by the Fed's severely adverse scenario?

Full Description

Related Outcomes:

Baseline Scenario

Severely Adverse Scenario

Adverse Scenario

FOUR (Optional): Hedge risk in the portfolio holdings.

This step can help you reduce risk by diversifying prospect holdings. The Hedging Wizard allows you to replace poorly performing investments with ones that are pre-tested to do well in a specific scenario.

One example of this is to run the historical scenario “Past Crashes: Financial Crisis: Sep 2008-Mar 2009” for a risk-averse prospect.

In this example, we would reduce risk by removing more volatile equity positions and replacing with a more conservative equity, bond fund, or SMA.

“One of my jobs in helping you reduce risk is to suggest ways to diversify your investments. What I’m putting together is a potential allocation that will 1) reduce your risky assets and 2) add less volatile investments.”

Simple Steps to Hedge Risk:

Step 1: From the Stress Testing page with your portfolio and downside scenario selected from Part 3, click the [Hedging Wizard](#) button on the side navigation.

Step 2: Select from one to all of the portfolio positions that you want to replace.

Step 3: Click [Next: Select Hedges](#) and either choose “Manually Enter Hedges” if you already know which assets you want to propose for the client, or “Run Hedging Screener” to discover assets that will do well in the scenario.

Step 4: If using “Run Hedging Screener,” then select the kinds of assets you want, plus optional criteria, and click [Show Hedging Options](#).

Step 5: Make sure your new allocations are the same type as your portfolio, i.e. dollar/share quantity portfolios are allocated in dollars and % models use percentages. Once done, click [Finalize and Review](#).

FIVE: Discuss the Comparison Report with your prospect.

Although HiddenLevers software is impressive when used interactively with a clients, it's not always the best approach. We offer client-ready reports to help you convey how several scenarios would affect your recommendation versus your clients' holdings.

Use the Portfolio Comparison Report to show the "before" and "after" for your client or prospect. To access this report, first select "Reports" from the top menu drop down and choose "Portfolio Comparison". Then, select the portfolios and scenarios you want to test. The portfolios you choose could be their current holdings, a recommendation, a benchmark, or something else.

Please note: Scenario Timeframe allows you to change the amount of time it takes a scenario to play out. You could say that an oil bounce back takes 3 years instead of 1 year to reach \$100/barrel. Changing the timeframe brings yields into account. Stress test results are cumulative over the time period selected.

The screenshot shows the 'Portfolio Stress Test Report' interface. At the top is a navigation bar with a search bar and menu items: Scenarios, Analytics, Data Center, Reports, and a user profile 'HL User'. A red arrow points from the 'Reports' menu to a red box labeled 'Access reports here'. Below the navigation bar is the report title 'Portfolio Stress Test Report' and a subtitle 'This report shows the relative impacts of the selected scenarios on one or two portfolios.' The interface is divided into two main sections: 'Choose Portfolios' on the left and 'Scenarios to Run' on the right. In the 'Choose Portfolios' section, there are fields for 'Current Portfolio' (Jon Smith) and 'Proposed Portfolio: Optional' (Jon Smith - Hedged), both with 'Add New' links. A red box labeled 'Add 1 or 2 portfolios' has arrows pointing to these fields. Below these are checkboxes for 'Show Asset Classes Only?' (checked) and 'Show Detailed Impact Explanations?' (unchecked). A red box labeled 'View results at asset class level, or show individual positions.' has an arrow pointing to the 'Show Asset Classes Only?' checkbox. At the bottom of this section are dropdowns for 'Scenario Timeframe' (set to 'Use Scenario Projected Timeframe') and 'Format' (set to 'PDF'), and a 'Run Report' button. In the 'Scenarios to Run' section, there are buttons for 'Run Selected Scenarios' and 'Run Entire Scenario Library'. Below these are buttons for 'Change Selected Scenarios' and 'Save as default?'. A red box labeled 'Add or remove scenarios' has an arrow pointing to the 'Change Selected Scenarios' button. The section displays three scenarios: 'Oil Crisis' (with a red box icon), 'Fed Stress Test 2015' (with a piggy bank icon), and 'Past Crashes' (with a world map icon). Each scenario has a list of 'Outcomes'.

Search...

Scenarios ▾ Analytics ▾ Data Center ▾ Reports ▾ HL User ▾ ?

Portfolio Stress Test Report

This report shows the relative impacts of the selected scenarios on one or two portfolios.

Choose Portfolios

Current Portfolio: Jon Smith [Add New](#)

Proposed Portfolio: Optional Jon Smith - Hedged [Add New](#)

Show Asset Classes Only? ☒

Show Detailed Impact Explanations? ☐

Prepared For:

Scenario Timeframe: Use Scenario Projected Timeframe ▾

Format: PDF ▾

[Run Report](#)

Scenarios to Run

[Run Selected Scenarios](#) [Run Entire Scenario Library](#)

[Change Selected Scenarios](#) ☒ Save as default?

Oil Crisis: What if a recovery in global economic growth drives demand

Outcomes: Bounce Back, Commodities Perfect Storm, Isolated Crash

Fed Stress Test 2015: What if the economy falls into a recession with a severity like that modeled by the Federal Reserve's official supervisory adverse scenario?

Outcomes: Baseline Scenario, Adverse Scenario, Severely Adverse Scenario

Past Crashes: This scenario covers the timeframe from October to early November of 1987, which includes the Black Monday crash.

Outcomes: Financial Crisis: Sep 2008 - Mar 2009, October 1987 Market Crash

Access reports here

Add 1 or 2 portfolios

Add or remove scenarios

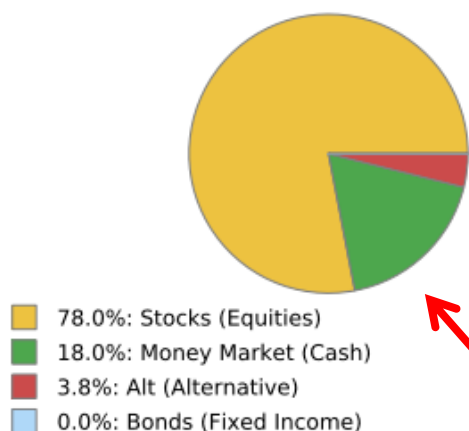
View results at asset class level, or show individual positions.

“As we can see in the Portfolio Comparison Report, by diversifying your other assets, we’ve significantly reduced your potential downside risk.”

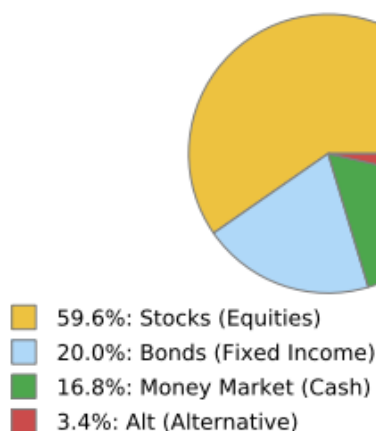
“Together, we’ve tested your portfolio to see how it might react to multiple scenarios that concern you and how alternatives might look.”

“Have you ever seen your investments tested in real-world scenarios like this? How does it make you feel to undergo this type of analysis?”

Jon Smith: Top Holdings



Jon Smith - Hedged: Top Holdings



Scenario Impact Summary

Scenario:

Past Crashes: Financial Crisis: Sep 2008 - Mar 2009

This scenario covers the most extreme portion of the global financial crisis, from the collapse of Lehman Brothers in September 2008 until the market lows of March 2009.

Fed Stress Test 2015: Adverse Scenario: Severely Adverse Scenario

What if the economy falls into a deep recession as modeled by the Fed's severely adverse scenario?

Baseline: S&P Up 10%

What if the S&P rises 10%, in line with its long term average since 1950?

“Before”

Jon Smith Return:

-50.4%

-45.4%

10.6%

Jon Smith - Hedged Return:

-30.5%

-27.1%

8.3%

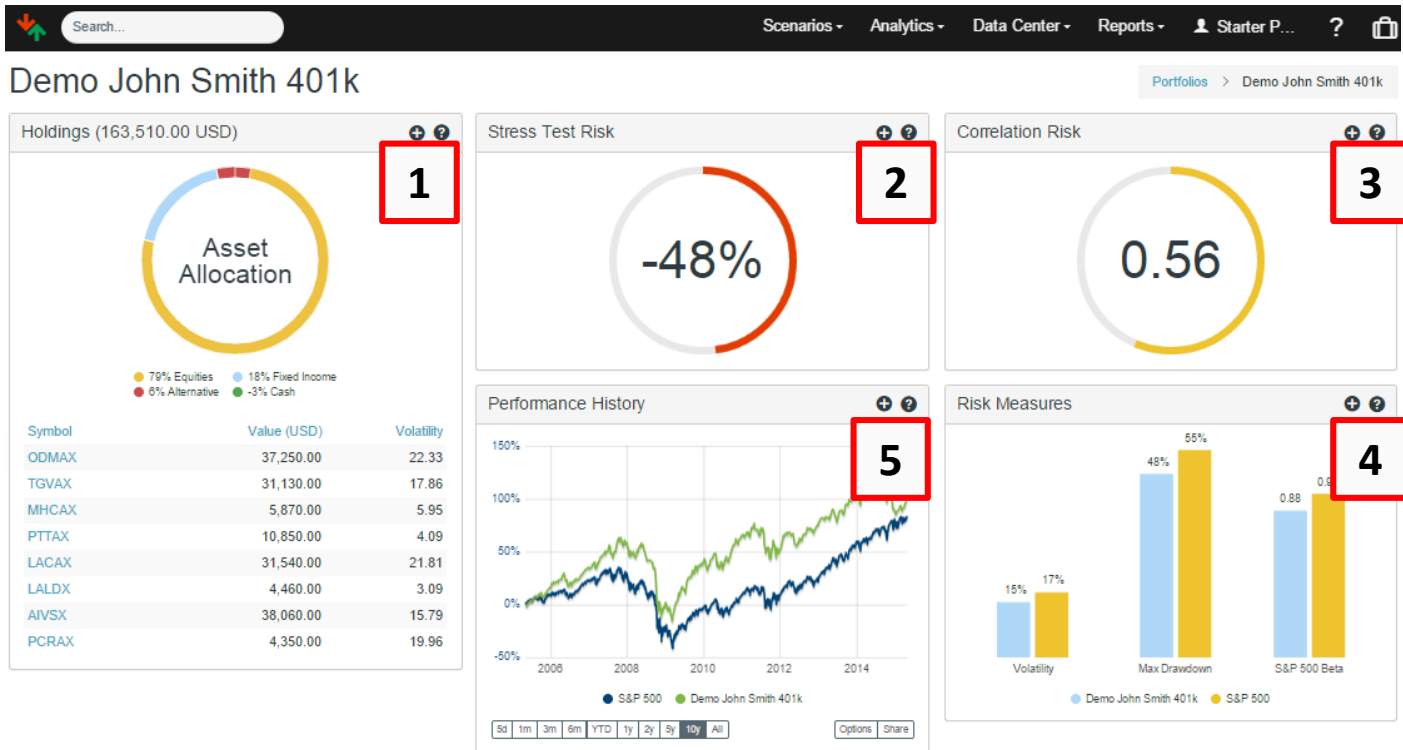
“After”

HiddenLevers is a powerful tool with intuitive design to make implementation easy. After running through one or two examples with actual clients, you will want to have this conversation with every client.

**INCREASE YOUR ABILITY TO ATTRACT,
ENGAGE AND CLOSE CLIENTS.**

The Risk Profile

Once you have your holdings entered into HiddenLevers, you can also learn about overall risks of a portfolio in addition to stress test risk. You can access the Risk Profile by using the search bar in the top left to call up the name of your portfolio. Clicking the name of the portfolio throughout the site will also bring you to the Risk Profile. Here are the parts of the Risk Profile:



The (+) on any section will open additional details.

1. Holdings

The asset allocation for the portfolio is broken down into four major categories (Equity, Fixed Income, Alternative, and Cash), and a full listing of holdings is provided. The additional details screen shows specific characteristics of each holding.

Holdings									
Symbol	Quantity	Value (USD)	Volatility	Name/Industry	Asset Class	Price (USD)	Yield	Age (Yrs)	1Y Trend
ODMAX	1,000.00	37,030.00	22.33	Oppenheimer Developing Markets A	0.00% Fixed Income, 1.85% Alternative, 6.29% Cash, 91.86% Equities	37.03	0.29	18.11	-0.75%
Fund - Diversified Emerging Mkts									

2. Stress Test Risk

The number at center indicates the greatest potential loss across all of HiddenLevers' scenario outcomes. The Additional Details popup gives a full listing of the potential upside and downside impact for all scenarios. To learn more about a topic and the specific outcomes, click the name of a scenario.

Stress Test Risk

[See All](#)

Scenario

Upside (%) Downside (%)

Past Crashes

-53.87%

This scenario covers the timeframe beginning with the October 1987 market crash, and continuing on for roughly six months thereafter.

Fed Stress Test 2015

[Access scenario details](#)**13.91%****-46.89%**

What if the economy falls into a recession like that modeled by the Federal Reserve's 2015 bank stress test?

Please note that the list of scenarios you see will change depending on the stress test results for the portfolio you are looking at. Once you click the name, "Fed Stress Test" in this example, you'll be directed to the Scenario Library. Here, there are economic details about each potential outcome (upside and downside) as well as curated content.

Search...

Scenarios ▾ Analytics ▾ Data Center ▾ Reports ▾ Starter P... ?

Scenario Library Run Stress Test

Fed Stress Test 2015: Adverse Scenario
Last Updated: April 2015
Key Lever: S&P 500
Progress: 0%

Baseline Scenario

Adverse Scenario

Severely Adverse Scenario

Outcome Overview
What if the economy falls into a recession with a severity like that modeled by the Federal Reserve's official supervisory adverse scenario?
The Fed's adverse scenario calls for:

- High inflation and interest rates with CPI at 4% and 10y at 5.8%
- A mild recession and slow recovery playing out over 3 years
- Falling home and stock prices, with equities down 28% at the bottom

Related Content

Scenario Impacts

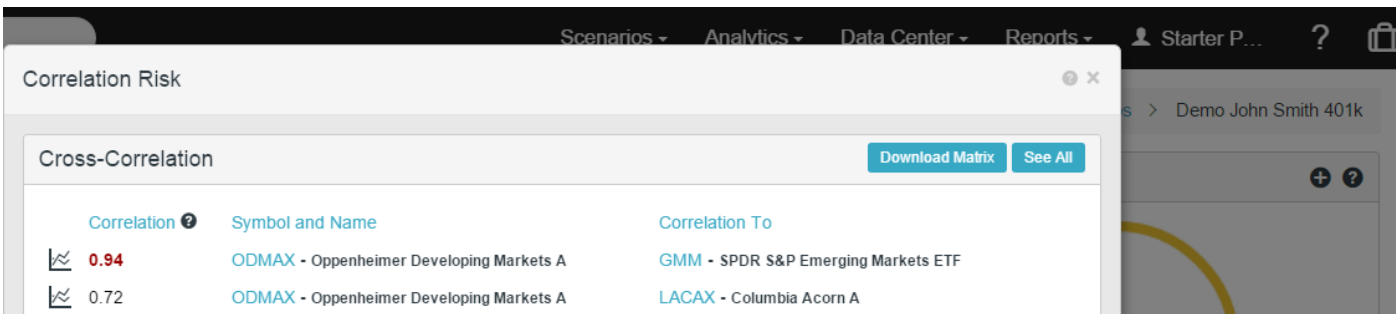
Lever Name	Value	Scenario Impact
Key Scenario Levers		
S&P 500	1446.85	<div></div> -31%
Primary Levers		
10Y UST Yield	5.54 %	<div></div> 3.48 pts
12M T-Bill Yield	5.43 %	<div></div> 5.18 pts
CPI	2.36 %	<div></div> 2.38 pts
EUR	1.04 \$	<div></div> -6%
Oil	85.86 \$/barrel	<div></div> 50%
Retail Sales	-0.36 %	<div></div> -1.62 pts

Switch between outcomes.
Watch assumptions Change.


3. Correlation Risk

The number at center is a measure of both correlation and concentration risk, computed based on the portfolio's full correlation matrix. The metric ranges between 0 and 1, with 0 representing an infinite number of perfectly uncorrelated positions, and 1 representing any number of perfectly correlated positions. A single position portfolio also receives a score of 1 (based on extreme concentration risk).

The expanded view (+) of Correlation Risk will show you positions in a portfolio that are highly correlated. This can drive a wedge between the prospect and their current advisor. It is also a valuable tool in determining which position in a pair is better suited for the portfolio.



In this example, we see ODMAX and GMM are highly correlated (as indicated by the red). To find detailed information about either position, click the ticker and you will be directed to a Risk Profile for the individual security.

Then, to show the relationship between the two positions, click the chart icon  to bring up a chart of the two positions. Here is the chart:



4. Risk Measures

This section provides a comparison between the portfolio and its benchmark across several key risk metrics. The additional details screen gives a larger range of comparison metrics, and which economic levers impact the portfolio most.

Risk Measures				
Traditional Measures		Timeframe: Mar-23-2007 - Present		
	Demo John Smith 401k	HL 80/20 Benchmark		
Volatility	18.96%	15.88%		
Maximum Drawdown	52.90%	45.44%		
S&P 500 Beta	0.96	0.80		
Sharpe Ratio	0.22	0.41		
Yield	1.76%	1.91%		
Total Return	40.71%	69.31%		

Lever Impacts				
	Impact	Current Value	1M Trend	1Y Trend
S&P 500	↑ 0.96	2,106.85	+0.99%	+12.00%
S&P Up Market Beta: 0.94 Down Market Beta: 1.05				
Copper	↑ 0.31	2.78 \$/lb	+0.15%	-9.19%
S&P Agricultural Commodities Index	↑ 0.02	118.60 (Index)	-0.18%	-28.57%
10Y UST Yield	↓ -0.36	2.06 %	+11 bps	-54 bps
12M T-Bill Yield	↓ -0.41	0.25 %	-2 bps	+15 bps
USD	↓ -0.97	95.19 (Index Value)	-2.86%	+19.71%

The traditional measures will compare your portfolio against a designated benchmark. The benchmark is automatically selected based on asset allocation. To customize benchmarks, click edit the portfolio.

The timeframe is based on the youngest position in a portfolio.

The “impact” column measures the sensitivity of the portfolio to the lever in % terms. For instance, if the impact coefficient for Oil is 1.5, this means that for every 1% move up in oil, the portfolio will move up 1.5%. The impact coefficient is similar to a correlation coefficient, but note that it can be greater than +1 or less than -1.

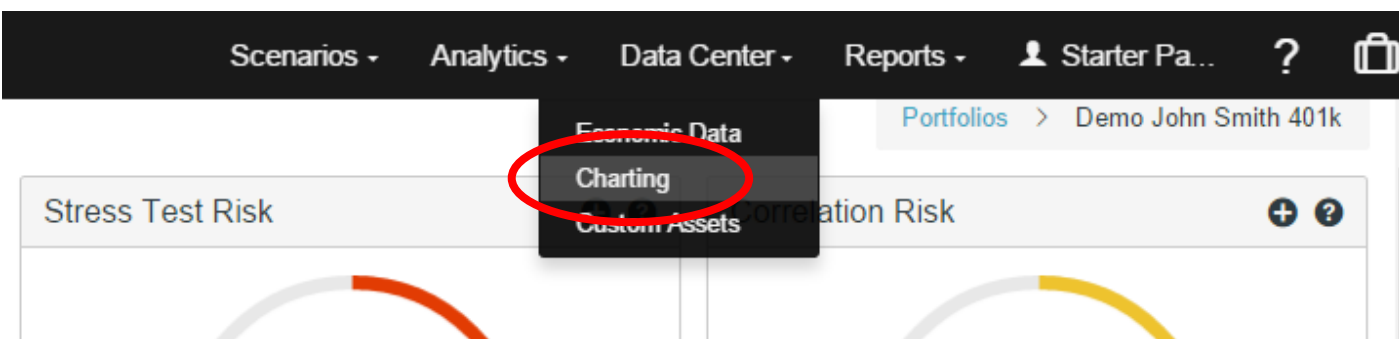
To set up custom automated benchmarks, go to your account settings. Select “Set custom benchmarks for portfolios” and you will be able to replace HiddenLevers benchmarks with those of your own design.

5. Performance History

The chart shows the performance of the portfolio compared against a benchmark. Please note that this chart does not take into account trading history as HiddenLevers does not store the actual trading history for an account. The chart reflects performance of a static portfolio. For model allocations, the chart reflects performance assuming that the portfolio is rebalanced to maintain the allocation over time.

Custom Charts:

In addition to the Risk Profile, you are also able to make custom charts in HiddenLevers. To access charts, go to Data Center > Charting.



In the charting package, you are able to chart portfolios, economic levers, and individual holdings. These charts are interactive and can be shared by email, social media, or html embedding. Example:

