January 2019
Chief Investment Office GWM
Investment Research

Bear market guidebook

How to prepare for the next market downturn

Introduction

Dear reader,

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We expect the current economic expansion and equity bull market to continue for several years. Even so, investors should not wait until the next downturn is imminent before they take commonsense steps to plan for one.

Although they are a natural part of the investing experience, there's a certain taboo about discussing bear markets and recessions, as if acknowledging them increases the likelihood of experiencing one.

Interestingly, this superstition is paralleled in the etymology of bear markets' namesake. In Proto-Indo-European—a predecessor to most modern-day languages—the word for 'bear' was 'rktos'. That ancient root still lives on in words like Arctic, but the modern name for 'bear' in English comes from a different origin altogether, from a root word meaning "the brown thing." Some linguists hypothesize that this evolution—which occurred in virtually all modern languages—was due to a superstition that saying using the bear's 'true name' would summon one.

In investing, this taboo is counterproductive. After all, by studying bear markets closely, investors will learn that they aren't as dangerous as they seem, and by cutting through the many misconceptions we can lay the foundation for protecting ourselves against them.

In this report, we attempt to answer three questions:

1. **What are the characteristics** of a bear market?
2. **How can we prepare** our portfolios and financial plans for the next downturn?
3. **What steps should we take** in the middle of a bear market?

It's important to note that there is no panacea for bear markets. Almost all investors will experience at least a handful of bear markets, both in working years and during retirement, and they will be painful.

But there's a difference between pain and damage, and our research tells us that bear market protection doesn't have to be expensive—especially if investors are proactive.

As we'll show in this report, bear markets needn't be a threat to financial success. In fact, for the well-prepared, they can be an opportunity to improve long-term returns.

Part 1

Bear market characteristics

Let's start with the definition of what constitutes a bear market.

Although there is some debate, we define a bear market as an episode where US large-cap stocks fall by at least 20% from peak to trough. Rather than focus only on the peak-to-trough drop time period—what we call the "drawdown" period—we also include the time that it takes for stocks to register another all-time high—what we call the "recovery" period.

The 20% threshold may seem arbitrary, but it is useful because it filters out a large number of painful-but-short-lived drawdowns for that asset class. For drops greater than 10%, but less than 20%, we generally call them 'bull market corrections.' For less-than-10% drops, there are no agreed-upon definitions. Selloffs of this magnitude are fairly common, and short-lived, and usually earn names like 'dip,' 'selloff,' 'reversal,' 'pullback' or 'slide.'

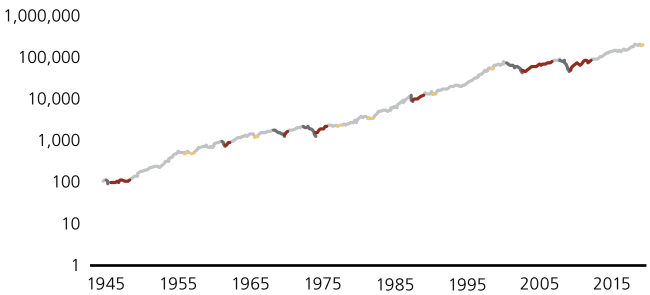
It's also important to note that, generally speaking, risk and return parameters are not relevant if we apply them directly to other asset classes or portfolios. After all, a 'big' percentage change for one asset class may be a relatively minor move for another asset class or investment strategy. So while we use US large-cap stocks as the basis for defining bear markets, this is only for clarity, not because we're suggesting that investors should measure their performance against an all-equity benchmark like the S&P 500.

With this definition in mind, let's look at historical returns to evaluate what market cycles look like using our framework.

Figure 1

Bear markets are rare, and over relatively quickly

US large-cap stocks, monthly returns since 1945, logarithmic scale

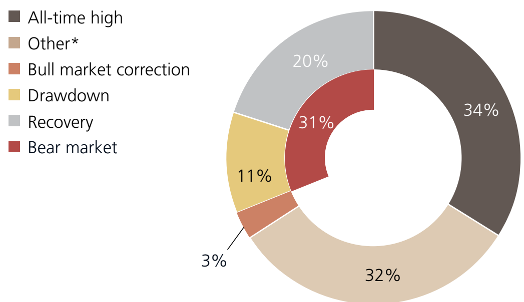


Note: 'Bull market' denotes periods where US large-cap stocks are at, or within 10% of, an all-time high
Source: Morningstar Direct, R: PerformanceAnalytics, UBS, as of 4 January 2019

Figure 2

Stocks have spent about 2/3rd of the time at, or within 10% of, an all-time high

Time spent by market environment, US large-cap stocks, monthly returns since 1945



* A less-than-10% drop from last all-time high
Source: Morningstar Direct, R: PerformanceAnalytics, UBS, as of 4 Jamiary 2019.

Figure 3

Diversified portfolios are designed to protect against the most painful parts of equity bear markets

Comparative statistics for equity bear markets since World War II

Peak year	1946	1961	1968	1972	1987	2000	2007	Average
US large-cap stocks								
Length of prior bull market*	169	184	78	31	157	155	62	119
Time between market cycles**	204	190	84	50	179	158	87	136
Peak	31/05/1946	31/12/1961	30/11/1968	31/12/1972	31/08/1987	31/08/2000	31/10/2007	
Trough	30/11/1946	30/06/1962	30/06/1970	30/09/1974	30/11/1987	30/09/2002	28/02/2009	
Recovery date	31/10/1949	30/04/1963	31/03/1971	30/06/1976	31/05/1989	31/10/2006	31/03/2012	
Max drawdown	–21.8%	–22.3%	–29.4%	–42.6%	–29.6%	–44.7%	–51.0%	–34.5%
Time to full recovery (new all-time high)	41	16	28	42	21	74	53	39
Drawdown time	6	6	19	21	3	25	16	14
Recovery time	35	10	9	21	18	49	37	26
Months of prior gains 'erased'	15	36	66	118	18	64	141	65
60/40 stock/bond portfolio								
Peak	31/05/1946	31/12/1961	30/11/1968	31/12/1972	31/08/1987	31/08/2000	31/10/2007	
Trough	30/11/1946	30/06/1962	30/06/1970	30/09/1974	30/11/1987	30/09/2002	28/02/2009	
Recovery date	31/10/1948	31/03/1963	31/12/1970	31/01/1976	31/01/1989	31/10/2004	31/12/2010	
Max drawdown	–13.4%	–13.0%	–17.6%	–26.4%	–17.4%	–21.7%	–29.9%	–19.9%
Time to full recovery (new all-time high)	29	15	25	37	17	50	38	30
Drawdown time	6	6	19	21	3	25	16	14
Recovery time	23	9	6	16	14	25	22	16
Months of prior gains 'erased'	14	17	19	25	5	35	21	20

Source: Source: UBS, Morningstar Direct, R: PerformanceAnalytics, as of 18 October 2018

* Months from previous trough to this cycle peak

** Months between previous peak and this cycle peak

Figure 4

Adding bonds significantly reduces bear market risk, in both pain and duration

Post-WWII bear market performance, based on asset allocation (US large-cap stocks and intermediate US gov't bonds)

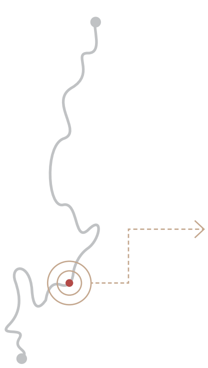
	Performance during post-WWII bear markets				
Allocation (stock/bond)	**Average drawdown**	**Average months of gains erased**	**Average time under water (months)**	**Worst drawdown**	**Longest time under water (months)**
100% / 0%	–34%	65	39	–51%	74
90% / 10%	–31%	60	38	–46%	73
80% / 20%	–28%	55	35	–41%	65
70% / 30%	–24%	53	33	–36%	59
60% / 40%	–20%	47	30	–30%	50
50% / 50%	–16%	34	25	–24%	40
40% / 60%	–11%	30	14	–17%	29
30% / 70%	–7%	23	10	–12%	24
20% / 80%	–4%	16	9	–7%	24
10% / 90%	–2%	10	6	–4%	19
0% / 100%	–1%	2	2	–3%	5

Less time → More time

Source: Morningstar Direct, R: PerformanceAnalytics, UBS, as of 4 January 2019

Rather than thinking of markets as a "cycle" or a "clock," this data helps us to see that markets are more like a runaway train when viewed over the long term. As investors, our job is to try to keep up with the train, which rarely stops and never truly goes backwards.

This context is important as we ask ourselves how much long-term growth we're willing to forfeit in order to improve our comfort level during the painful-but-rare 'pauses.'



Lookout stop
Since 1945, US large-cap stocks have spent approximately 25 years at an all-time high, 24 years within 10% of an all-time high, two years in a bull market correction, and 22 years in a bear market.

Part 2

Before the bear shows up

Unfortunately, history tells us that the quest for "the perfect hedge" may be a wild goose chase. No matter how well-intended or designed, the strategies that provide the most potent protection against equity downside risk also tend to be the most costly in terms of sacrificing long-term growth potential.

That's particularly true if the goal is to hedge against all downside movements, instead of only against the long and deep sell-offs that characterize bear markets. That's because—in order to make sure that there is a high negative correlation during all downside episodes—a strategy must risk also having a high negative correlation when markets go higher. In a world where stocks usually go higher, strategies that seek to go "short" or directly hedge equities seem doomed to fail. This cost is especially high for strategies that employ leverage to "make the most" of their short windows of opportunity.

As a result of these challenges, we don't usually recommend direct hedges as a part of our strategic or tactical asset allocation. As we will note below, it's important to prioritize cost-effective protection before moving on to less-reliable or costlier hedging strategies. Here are some "damage mitigation" strategies, in declining order of efficiency:

1. Think structurally

Make sure that your portfolio is taking the right amount of risk to meet your short- and long-term objectives; if those objectives appear in conflict, the Liquidity. Longevity. Legacy.* (3L) strategy can help you to make sure that your portfolio is able to meet both sets of goals.

2. Plan strategically

The most direct way to manage equity risk is to trim some stocks from the portfolio in favor of a higher allocation to core bonds (government and municipal bonds).

3. Consider hedges

There are many strategies that could mitigate the portfolio's downside exposure if used to replace a part of the equity allocation. In addition to the candidates surveyed in *Exchange-traded funds: Managing equity downside*, investors can also consider a systematic allocation strategy, hedge funds, or structured notes that accept limited upside in return for explicit downside protection.

4. Manage liabilities prudently

If used carefully, debt can be hugely beneficial to improving bear market returns. Having reliable access to credit during a bear market—when interest costs are record-low and investment opportunities are the most attractive—can help investors avoid selling at bear market prices and vastly amplify return potential during the first stages of a bull market recovery. On the other hand, when debt is used imprudently, it can be ruinous.

*Timeframes may vary. Strategies are subject to individual client goals, objectives and suitability.
This approach is not a promise or guarantee that wealth, or any financial results, can or will be achieved.

1. Think structurally

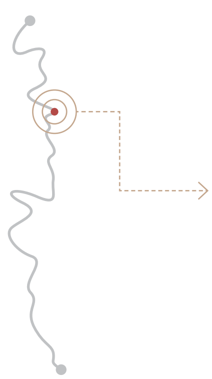
Investors can use our Liquidity. Longevity. Legacy.* framework to develop their overall investment strategy based on their personal goals and objectives. Doing so ensures you have the right amount of investment risk – not too much and not too little – for your current situation.

The 3L framework starts with building a Liquidity strategy, which is designed to provide needed cash flow over the next 2-5 years. The reason we structure a Liquidity strategy for that time period is we want to make sure you don't have to liquidate risk assets, like equities, during a downturn.

If you're working, your **Liquidity** strategy might simply be an emergency fund that can be accessed in the event of a period of unemployment. Retirees' Liquidity assets could include pensions (public and private), cash, and a 3-year bond ladder that, in sum, match the retiree's planned expenditures. Borrowing facilities are another component for meeting cash flow needs, but these need to be managed carefully (see *4. Manage liabilities prudently,* page 14).

Next, we structure a **Longevity** strategy. The Longevity strategy is designed and sized to include all of the assets and resources you need to utilize for the remainder of your lifetime, which provides a clear picture of what future spending objectives will likely cost. It is also managed appropriately for that task—a well-diversified portfolio but with an eye to inflation while managing downside risk. Longevity assets include retirement assets, growth portfolios, long-term care policies, primary residence, and similar assets. Over time, these assets can be transitioned to replenish the Liquidity strategy.

The **Legacy** strategy includes assets that are in excess of what you need to meet your own lifetime objectives. It clarifies how much a family can do to improve the lives of others—either now or in the future. Investment portfolios in the Legacy strategy are typically invested fairly aggressively since the time horizon associated with the portfolio can usually be measured in decades and might also include collectibles, charitable funds, or other homes and real estate.



Lookout stop

Our Liquidity. Longevity. Legacy.* framework helps investors structure an investment strategy based on their goals and objectives throughout their lifetime. For more information, read our *Liquidity. Longevity. Legacy.: A purpose-driven approach to wealth management* report.

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Figure 5

A roadmap to the 3L framework

Liquidity

Resources to maintain your lifestyle

- Emergency fund
- Liquidity strategy financial assets
- Social Security income
- Pension income
- Line of credit

↓ Funds

Your expenses

Longevity

Resources to improve your lifestyle

- Primary residence - Mortgage
- Taxable accounts
- Retirement plans/accounts
- Social Security
- Pension
- Healthcare, Medicare
- Long-term care

Legacy

Resources to improve the lives of others

Family
- Life insurance
- Vacation home
- Grandchildren's education savings

Philanthropy
- Donor Advised Fund (DAF)
- Strategic giving

Federal estate tax
- Estate tax

Your attorney, accountant, and other trusted professionals
- Healthcare proxy
- Durable power of attorney
- Estate documents
- Gift tax return

Source: UBS

2. Plan strategically

The most important action an investor can take is to calibrate his or her overall asset allocation positioning to ensure the portfolio continues to align with the family's goals and objectives. It's important to ensure that large changes in the portfolio's allocation are done rarely and proactively.

By contrast, we don't recommend jumping into or out of the market based on short-term forecasts (accurate crystal balls remain hard to come by), and emotions tend to trump reason once markets become volatile.

We believe it is particularly important to hold well-diversified investment portfolios in late-cycle. Although somewhat-concentrated portfolios can work very well during bull markets (e.g. equity-heavy US-centric portfolios during the current expansion), less-diversified portfolios tend to exhibit larger drawdowns and longer recovery times.

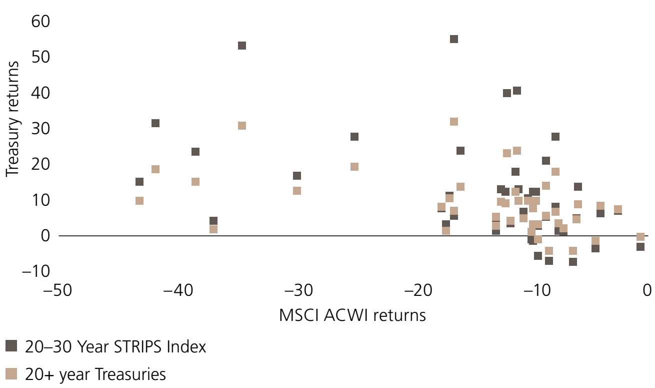
3. Consider hedges

There are some positions investors can add to their portfolio during late cycle that can be seen as mainly hedging in nature. In general, we prefer hedging positions that don't "cost" the investor too much, either explicitly or implicitly, but will provide meaningful downside protection during a bear market. These positions include: (1) long-duration bonds, (2) regime-shifting strategies that can cut equity positioning substantially, and (3) certain structured products that cap downside exposure.

Figure 6

Long-duration bonds can help cushion against equity sell-offs

6-month total returns for 20+ year Treasuries, 20-30 year STRIPS, during periods where global stocks fell, in %



Source: Bloomberg, UBS, as of 4 January 2019

Long-duration bonds

Interest rates typically fall during bear markets, because during recessions the Federal Reserve lowers interest rates and inflation pressures abate. As a result, fixed income assets typically perform well, enjoying a "flight to safety" rally. This return boost is greater for assets with higher duration.

In addition to considering longer-duration Treasuries, investors can also consider zero-coupon bonds or STRIPS ("Separate Trading of Registered Interest and Principal of Securities"), which pay no interest to the holder and offer a higher sensitivity to interest rate moves (e.g. duration risk) than interest-bearing securities. These assets exhibit what is known as positive convexity, which means that as interest rates fall they become even more sensitive to interest rate declines.

As shown in Fig. 6, long-duration Treasuries' response to recession-risk concerns is more potent, making them an effective "hedge" that may detract from gains during particularly strong market environments but should on average provide a positive return even if a recession doesn't occur.

Regime-shifting strategies

These are market-timing strategies that aim to add and reduce risk dynamically in order to manage risk and opportunity through market cycles. One example is the Systematic Allocation Portfolio strategy (SAP), a regime-shifting model that was developed by the UBS Americas Asset Allocation Committee (available through UBS Asset Management). The SAP strategy uses a quantitative model to shift between three levels of equity exposure: high, neutral, and low. Ultimately the goal of SAP is to significantly reduce equity exposure during sustained market drawdowns while maintaining high levels of equity exposure during bullish periods.

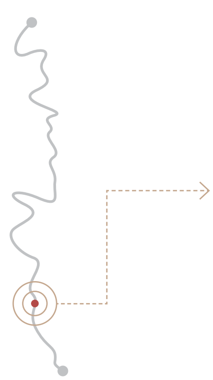
A regime shifting model like SAP can be useful, in particular, for investors that will be taking withdrawals from their portfolios and therefore have to worry about sequence risk. For those investors, potentially limiting drawdowns can help to improve long-term outcomes.

Structured products

These are investment vehicles, sometimes called structured notes, that use derivatives to adjust the risk/reward of an underlying index over a certain time period. They can be useful for fine-tuning risk and return characteristics for an asset class, and thus should be considered an important option in an investor's "bear market tool belt." For example, an investor that wants to add exposure to emerging market stocks, but is concerned about downside risk, may feel more comfortable using a structured note, accepting illiquidity and sacrificing some of the asset class's potential upside in exchange for some downside protection. For example, a 5-year structured note tied to the MSCI Emerging Markets Index might give an investor 80% of the upside of the index, but protect the investor against the first 10% of the index's loss as long as the note is held to maturity.

Bottom line

As a general rule of thumb, the more "perfect" a hedge is, the more costly it becomes. If you find something that seems to be an exception to this guideline, tread carefully—it may be too good to be true. When it comes to meeting long-term goals, missing out on equity downside is probably less important than it seems, so always bear this in mind when deciding whether the opportunity cost of direct hedges is worth the value of mitigating downside risk.



Lookout stop

When used prudently, borrowing can provide a "Plan B" to avoid liquidating risk assets at 'bear market prices'. Even so, take care; too much leverage can increase the risk of forced selling. Be sure to review your borrowing capacity (e.g. securities-backed lending and home equity lines of credit) with your UBS financial advisor.

4. Manage liabilities prudently

Debt can be segmented into two general categories: strategic debt and tactical debt. Investors should evaluate their usage of both during late-cycle.

Strategic debt is generally long-term, used to acquire a significant balance sheet position, and helpful for maintaining diversification and flexibility on a balance sheet. Mortgages to purchase real estate and student loans to acquire human capital are two examples. To the extent that investors have variable rate strategic debt, we suggest determining whether or not there might be an opportunity to refinance at the present time based on interest rates expectations over the next few years. Short term rates have increased, but longer term rates have not followed suit. That relative shift means that borrowing costs for longer-term debt are not substantially different than short-term debt.

We define tactical debt as debt that's used opportunistically on a short term basis to improve outcomes. For example, in lieu of liquidating portfolio positions and realizing taxable gains, a family might borrow against their investment portfolio to pay for a large expense. We recommend that all families have borrowing capacity available in order to easily execute on those types of opportunities.

One note of caution around debt. Borrowing costs have increased commensurately with interest rates. Over the last decade, some investors have been taking advantage of low borrowing costs to effectively leverage their portfolios with the expectation of earning a "spread" relative to borrowing costs. As the market cycle has matured, and rates have normalized, this spread has narrowed. A bear market can quickly turn leverage from a 'carry trade' to a 'margin call'. Investors should have a plan to pay down debt when markets are healthy; this, along with consolidating assets to increase availability and improve borrowing terms, can help make sure that borrowing capacity is available during bear markets.

Part 3 (open in case of emergency)

What to do during a bear market

There are a handful of tactics that investors can employ during a bear market.

Don't panic

Remember that bear markets are painful but temporary. Sticking to your plan is key, so resist the urge to change the risk profile of your portfolio or make sizable shifts out of stocks or into cash.

Portfolio management

Investors should use sell-offs as opportunities to harvest capital losses—a strategy that over time we estimate can add about 0.5% to after-tax annual portfolio returns. And rebalancing the portfolio can also enhance upside by ensuring that your portfolio doesn't drift too far from your target allocation. These fall into the category of "high-probability" alpha generation, because they'll probably help improve after-tax returns regardless of how quickly markets recover.

Play for time

Investors should look for ways to increase their savings rate or cut back on spending. This is also a time to consider tapping borrowing facilities as a bridge to avoid locking in losses, but don't take on enough leverage to risk a 'margin call' if markets don't quickly recover.

Tactical opportunities

While every bear market is different than the last, there is one constant: there are always market dislocations that can provide opportunities to enhance returns. Generally, we recommend "leaning in" to risk assets when market prices are out of step with fundamentals. For investors that enter a bear market well-prepared (having isolated their cash-flow needs from market risk), it may be appropriate to unwind portfolio hedges and increase portfolio risk temporarily to take advantage of higher return potential.

Publication details

Publisher
UBS Financial Services Inc.
CIO Americas, Wealth Management
1285 Avenue of the Americas, 20th Floor
New York, NY 10019

This report was originally published on
30 January 2019.

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