Impact of Recessions on CRE Values: Lessons from the NCREIF Index

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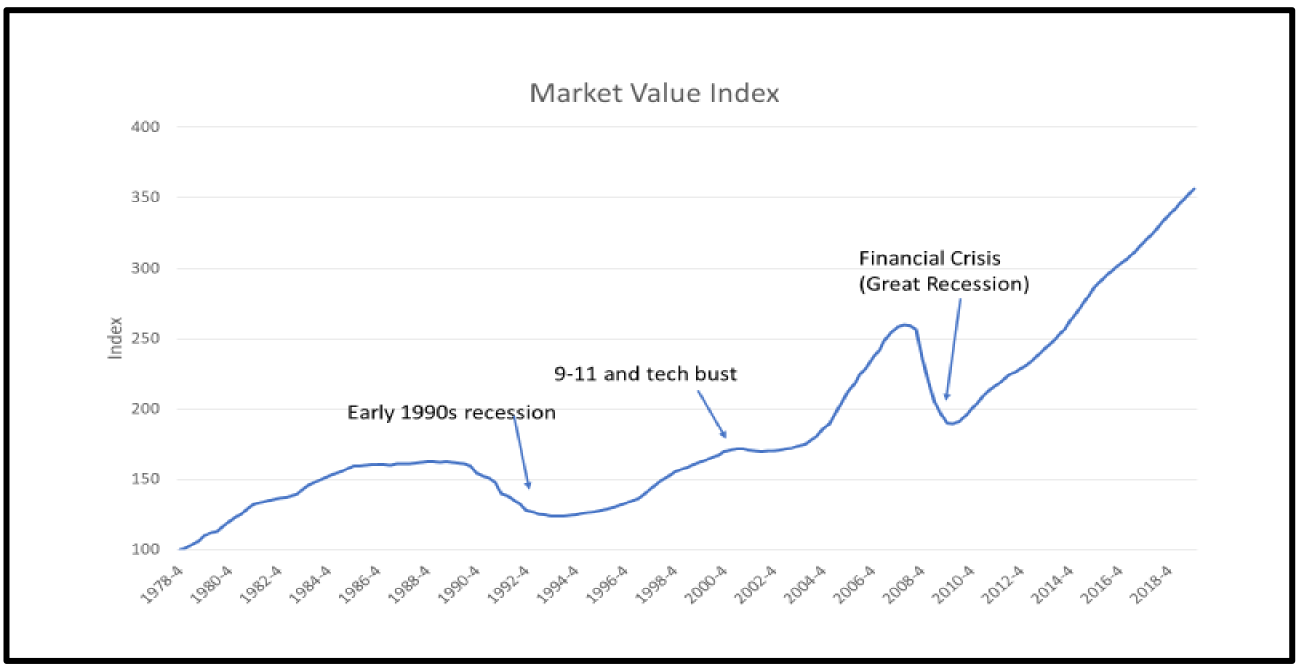
Introduction

The National Council of Real Estate Investment Fiduciaries (NCREIF) was formed to track the values and returns for institutionally owned commercial real estate (CRE) in order to compare with other asset classes and understand how economic events can impact performance. The quarterly data used for the NCREIF Property Index (NPI) starts in 1978 and spans two major recessions (early-90s and the financial crisis leading to the Great Recession) and covers the impact of the tech bust / 9-11 on CRE. The index includes the performance of over 40,000 individual office, industrial, retail, multifamily and hotel properties (including acquisitions and dispositions over time). NCREIF also collects data on other property types such as self-storage, parking and seniors housing as well as data on properties in development and lease-up stages of their lifecycle. This provides a unique database for analyzing the impact of economic shocks on property values.

Impact of Recessions on Market Value Index

Exhibit I shows how the market value of NCREIF properties has changed since the inception of the NCREIF Property Index (NPI). The index starts at 100 in the fourth quarter of 1978 and shows the change in the level of the index through the fourth quarter of 2019. The NCREIF Market Value Index (MVI) shown in the exhibit is an equal weighted version, which is the best way statistically to extrapolate to a broader population of properties beyond those in the "sample" of NCREIF properties.

Exhibit I: NCREIF Market Value Index



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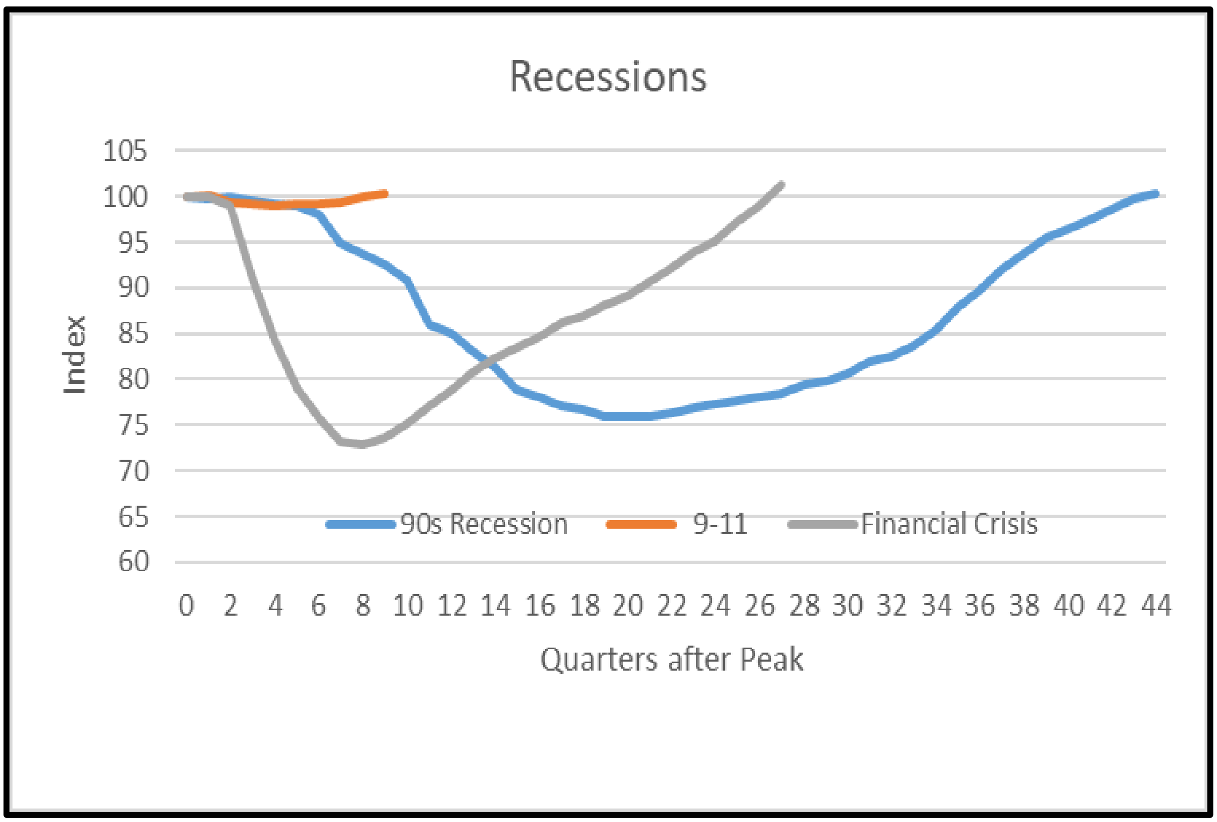
It should be noted that the causes of each recession were quite different. The impact of COVID-19 on property values may be different than for previous recessions. That said, a historical perspective may give us a sense of the possible scenarios so managers and investors can stress test their commercial real estate portfolios based on what we can learn from the NCREIF data.

Exhibit II compares each by starting an index at a value of 100 at the peak prior to the recession and ending when the index got back to 100. In other words, we can track how deep values fell and how long it took to return back to the peak. The degree of value drops and length of each of these recessions varied significantly. The tech bust / 9-11 period only resulted in a very slight decline in property values that didn't last very long. The recession in the early-90s had a decline in value of about 25% and took 44 quarters or ten years for the value to recover back to the pre-recession peak. The more recent financial crisis had a slightly greater decline in value of about 27% but the index recovered much more quickly. This was most likely the result of better data to value properties and more of a desire by investment managers to get the properties in their funds marked to market as quickly as possible. The frequency of independent external appraisals had increased from the early-90s to the time of the financial crisis.

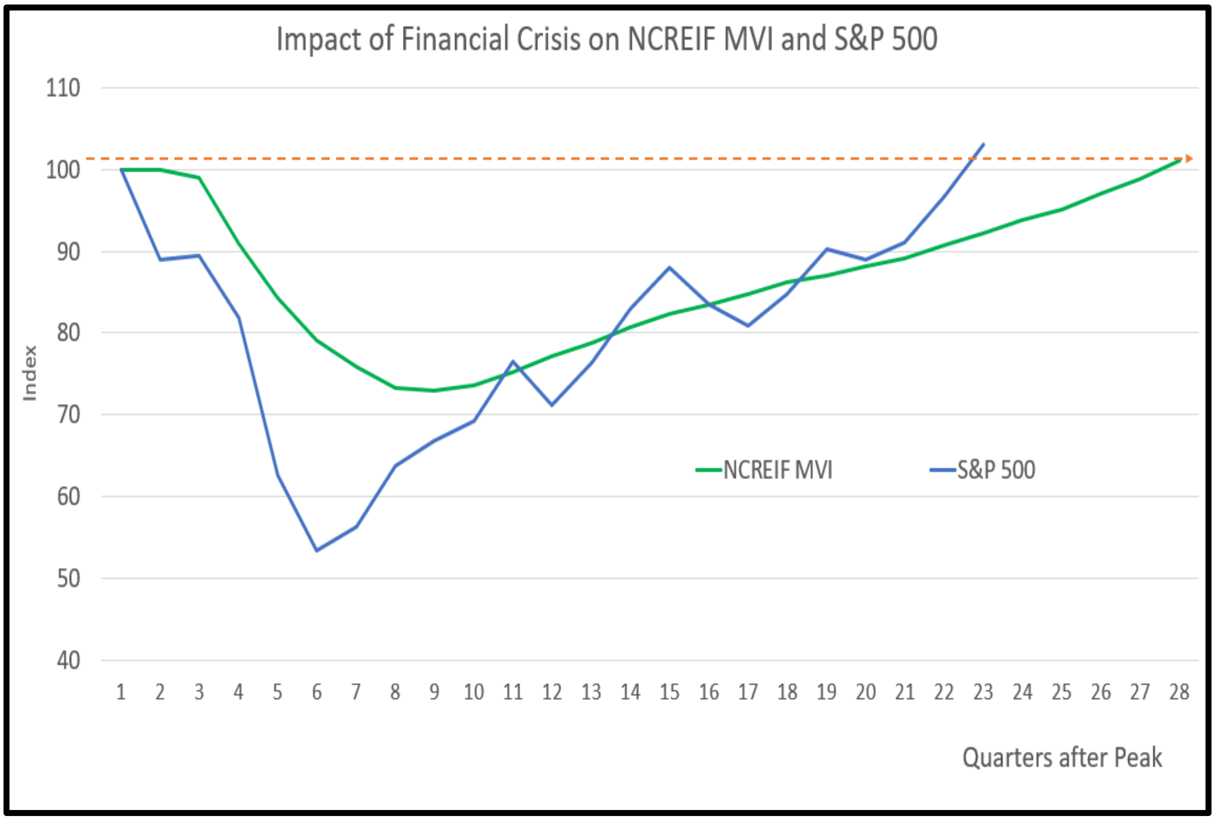
Exhibit II: Comparing Value Decline and Length of the Recessions



NCREIF MVI vs. S&P 500

Real Estate Indices like the NPI are quarterly whereas we know the change in value for stocks such as the S&P 500 every day on a real time basis. But if we convert the changes in the S&P 500 index to a quarterly index, how did it compare to the MVI during the financial crisis in terms of the decrease in value and time to recovery? Exhibit III shows the results.

Exhibit III: Impact of Financial Crisis on the NCREIF MVI and the S&P 500



The S&P 500 started dropping at the same time but the decrease in value was significantly more than for the NCREIF MVI. The S&P 500 dropped by about 45% at its lowest point. It then caught up to the MVI after about four years and followed the MVI closely thereafter although it reached its pre-recession high about five quarters before the MVI.

Although the factors that impact stocks may be quite different than those that impact the real estate market, this relationship alone may give us some insight as to what may be coming for commercial real estate due to COVID - 19. Especially when we consider that it is impacting businesses that have closed as well as the buildings where they rent space. This was not true for the recession of the early 90s or the tech bust / 9-11 downturn. The former affected real estate much more than stocks and the latter affected stocks much more than real estate.

Impact of Recession on Individual Property Sectors

The previous analysis included all the main property types. But the recession did not impact every property type the same in terms of the decline in value and the time to recovery. Exhibit IV shows the market value index for each of the main property types over the history of the NCREIF Property Index.

Exhibit IV: Market Value Index by Property Type

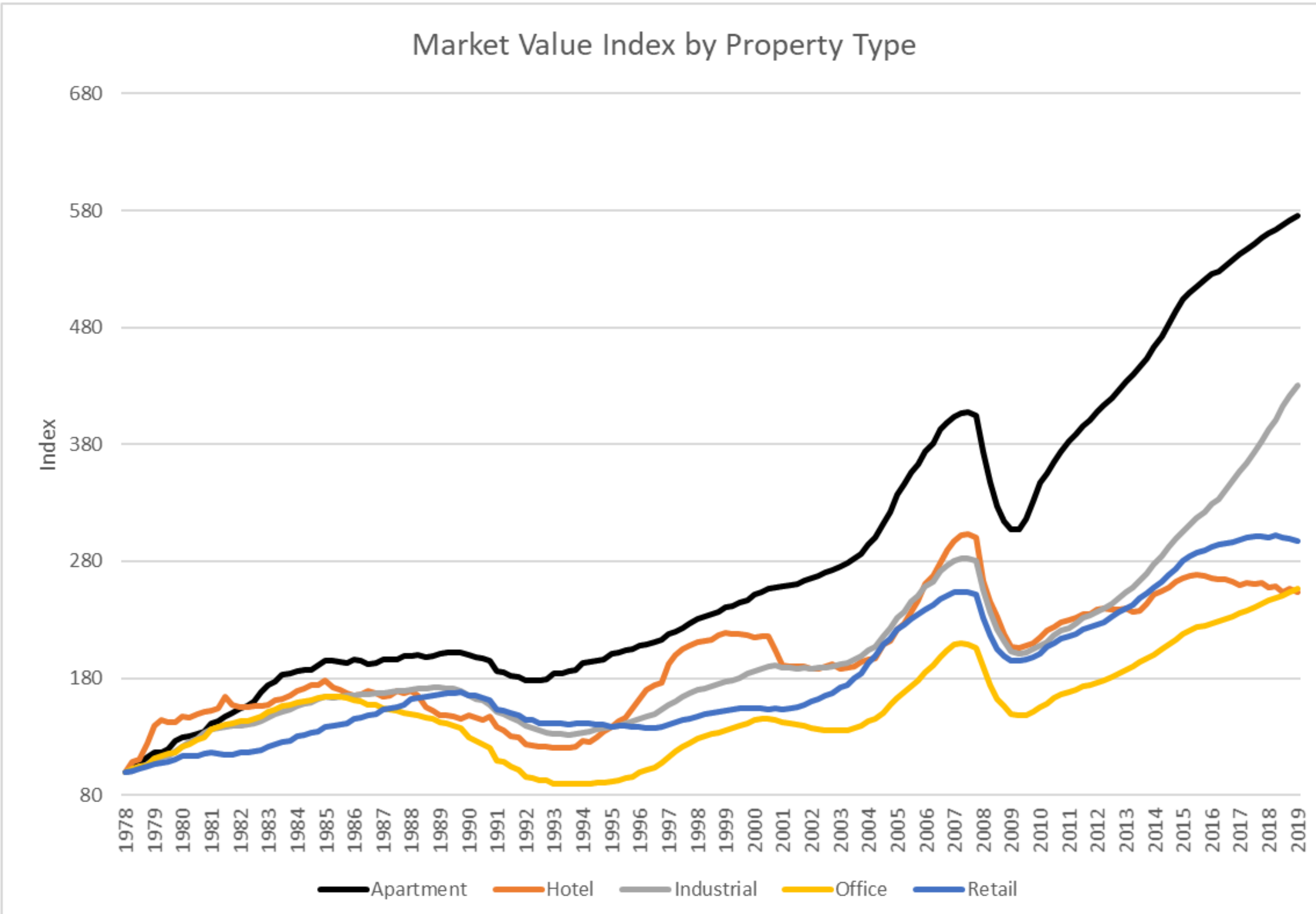
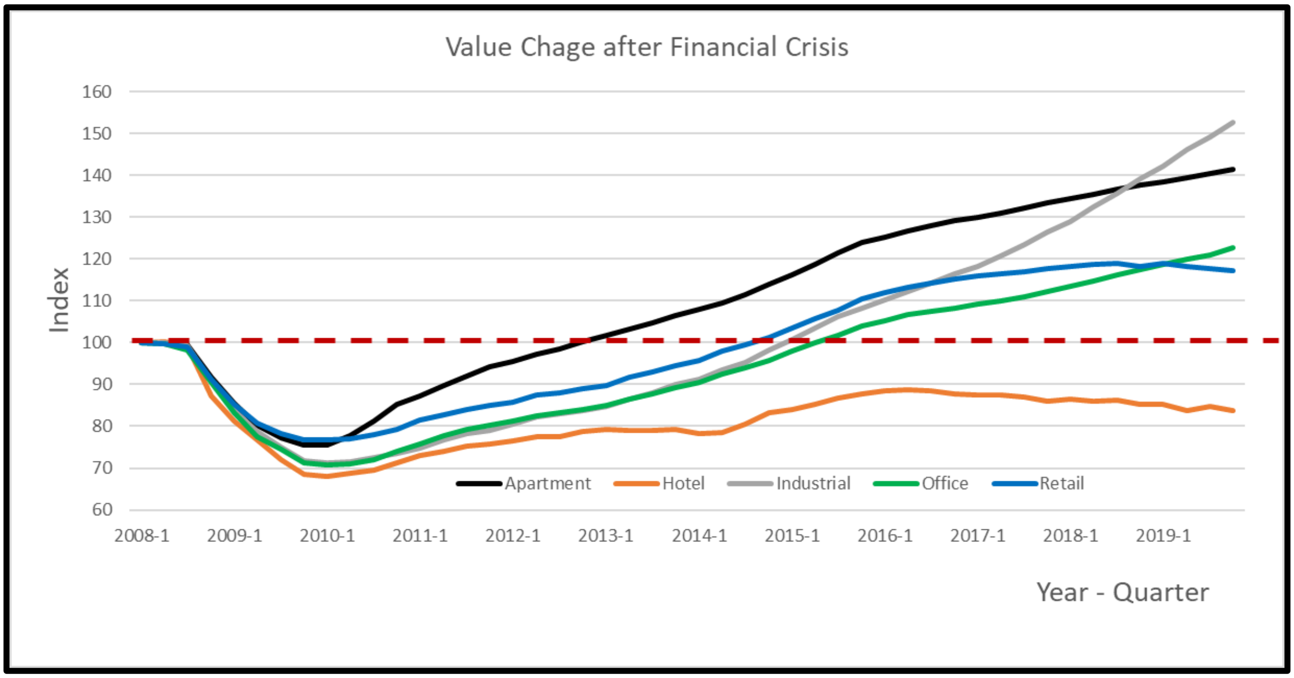


Exhibit V indexes each property type at 100 at the start of the financial crisis to see the relative drop and time to recovery for each.

Exhibit V: Impact of the Financial Crisis on Property Sectors

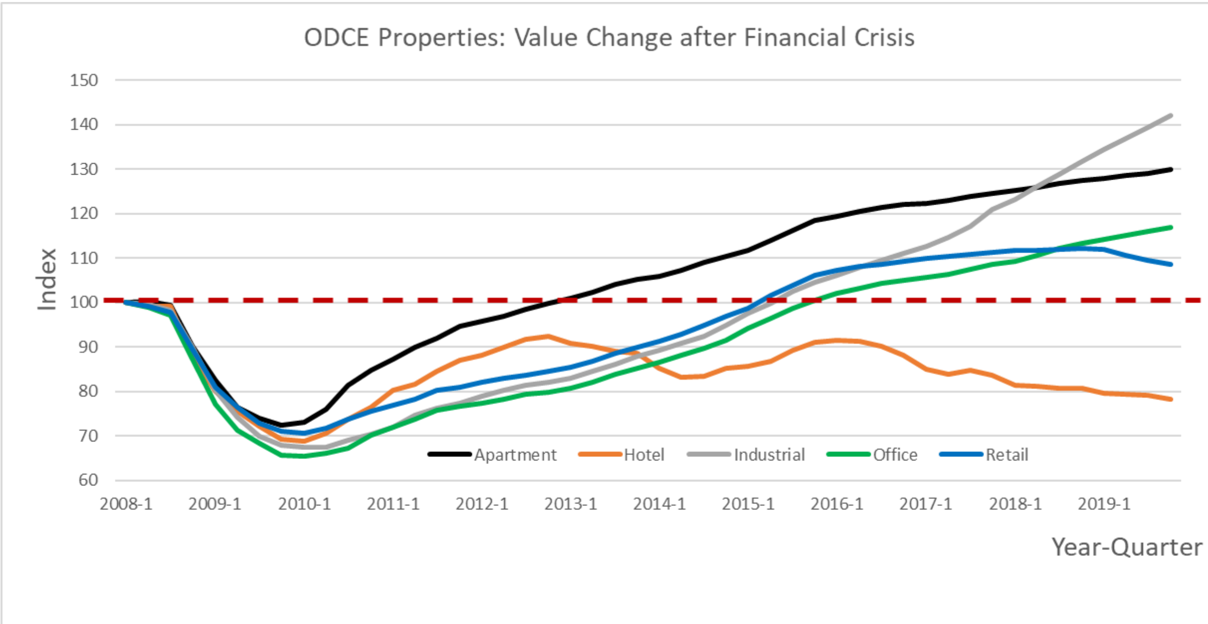


Hotel properties suffered the most decline in value from the financial crisis and have not yet reached their pre-recession value. A caveat is that the sample of hotels in the NCREIF index is much smaller than the other property types. Retail had the least decline in value and recovered only second to apartments. Of course, retail has since had problems unrelated to a recession. Apartments just declined slightly more than retail properties but recovered the quickest as people who lost homes or couldn't qualify for a mortgage as a potential first-time homeowner rented apartments. Office properties had the second most drop in value and was the last to recover except for hotels (which as noted above has not yet recovered).

Impact of Recession on ODCE Properties, by Sector

The NPI consists of properties in a variety of different fund types (open- and closed-end) with different strategies (core and value-add) in addition to properties in separate accounts. Thus, one might question whether the impact of the recession on property values depends on the type of fund. One reason might be that open-end funds tend to rely more on independent external appraisals. And core funds might invest in less risky properties. To examine this, we look at the results for properties in the Open-End Diversified Core Equity (ODCE) index which must meet strict requirements for inclusion and has become a benchmark for many funds and the industry. Exhibit VI shows the results of the impact of the financial crisis. Comparing Exhibit VI with Exhibit V, we don't see significant differences in the decline in value due to the financial crisis. Hotels were the main sector that behaved a little differently but the sample size for hotels is quite small compared to the other property types and they still were the only sector to never return to their pre-recession value.

Exhibit VI: Impact of Financial Crisis on ODCE Properties, by Sector



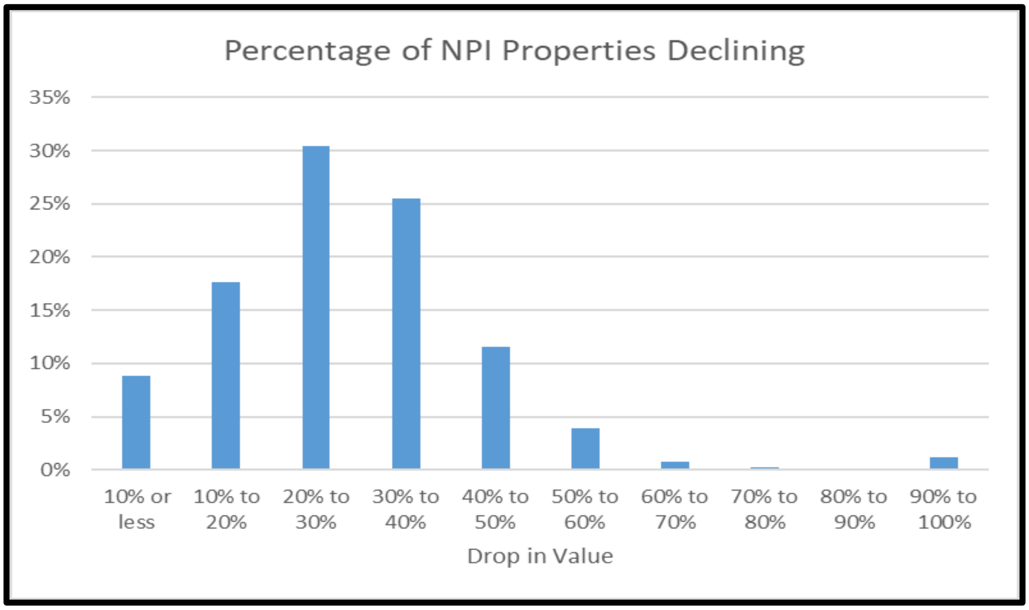
Impact of Recession on Individual Properties

The preceding analysis evaluated the impact of the recessions on an index of property values which is like holding a diversified portfolio of properties. A related but different question is how individual properties were impacted. Some properties will have declined less than the index and others will have declined more than the index.

The more recent financial crisis had the greatest decline in values but also the quickest recovery as discussed above. For those properties that were in the index from peak to trough (but not necessarily until recovery), we determine how many fell by a specific percentage starting with 10% or less (which included some that actually increased in value) to those that lost all their value. The results are shown in Exhibit VII.

The exhibit shows that about 9% of the properties decreased 10% or less, increasing to about 18% of the properties declining by 10% to 20% and the largest number of properties (slightly over 30%) declining by 20% to 30%. Another 25% declined from 30% to 40% and there were properties that declined in value all the way to a few in the range of 90% to 100%.

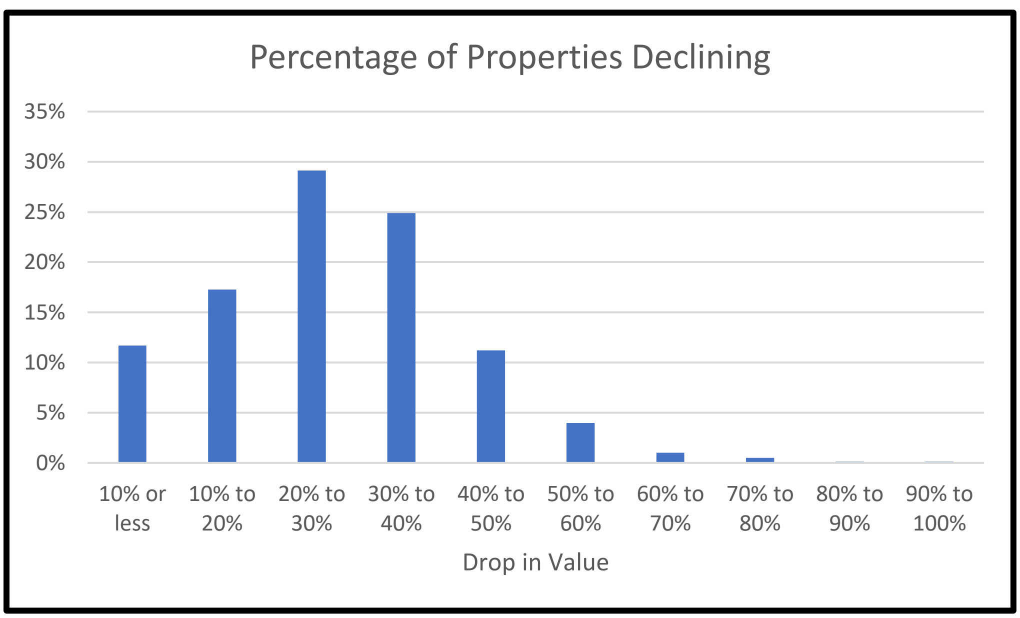
Exhibit VII: Decline in Value of Individual Properties during Financial Crisis



Impact of Recession on NPI-Plus Investments

In addition to the operating properties of the five sectors that are in the NPI, NCREIF collects data on other stages of the life cycle (e.g., development and lease-up) as well as other property types such as parking, seniors living and self-storage. Exhibit VIII shows the percentage of properties declining by different amounts if properties in all lifecycles and property types collected by NCREIF are included. There aren't significant differences from the pattern we saw in Exhibit VII.

Exhibit VIII: Including Expanded Property Types and Stages in the Life Cycle during Financial Crisis



Summary

The impact of prior recessions on properties in the NCREIF index give us a lot of insight into what the potential declines in value might be from future recessions including what might happen from any recession due to COVID-19. Of course, the decline in value and time to recovery may differ for COVID-19 since this is much different than the cause of prior recessions; they were due to overbuilding prior to the early 90s and overleveraging of properties prior to the financial crisis. That said, this may at least provide some guidance as to the extent of the impact on different sectors, combined with what the trends in the different properties have been just prior to the impact of the coronavirus. Future research could include models that combine relationships between the historical NCREIF data and various economic factors such as the GNP and interest rates and forecasts as to how these economic factors might be impacted by future recessions. In fact, this article showed an interesting relationship between the impact of the financial crisis on the S&P 500 vs. the NCREIF MVI. Whether we see something similar due to COVID-19 remains to be seen but should be monitored closely.