



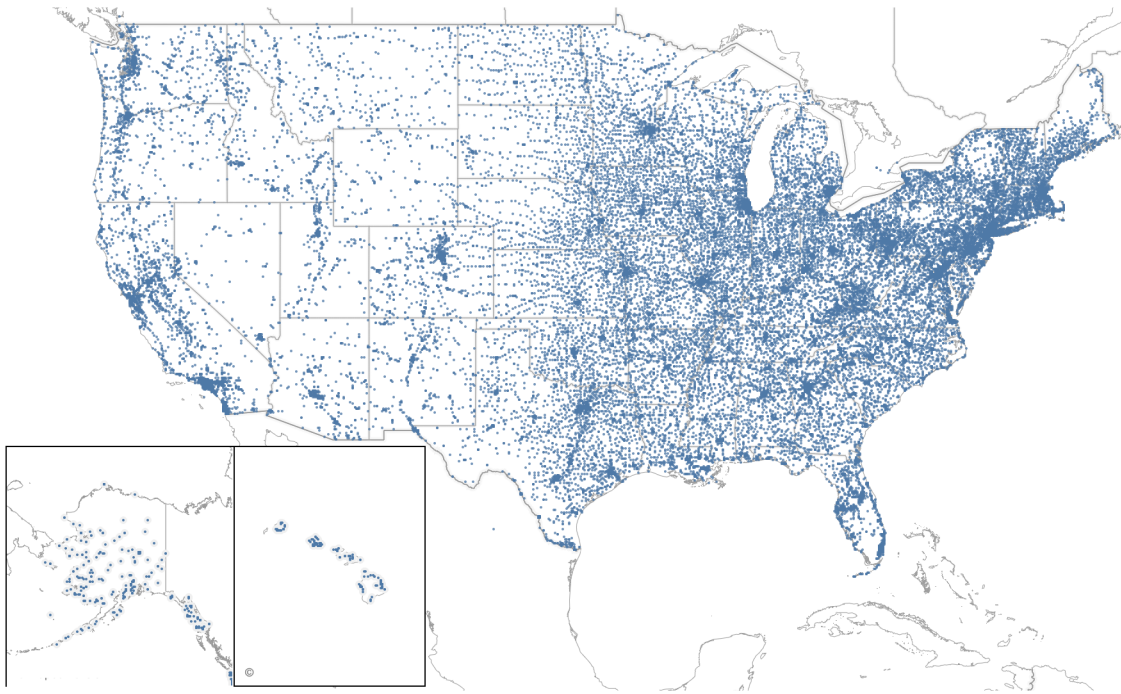
FEDERAL LEASED PROPERTY MARKET

COLLIERS | GOVERNMENT SOLUTIONS

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Federal Leases Are Distributed Across the Entire Nation

Federal Leased Properties



There are approximately 42,000 federal leases in the United States totaling 334 MSF. More than half of these are U.S. Postal Service locations that are very small, with a median size of less than 2,000 SF.

The locations of federal leases roughly correlate with population distribution, though there are some exceptions. 1) The federal government maintains a regional presence in cities like Chicago, Atlanta, Dallas and Kansas City, among others; 2) The federal presence on the north and south borders is relatively larger, primarily housing the Department of Homeland Security (DHS), and ; 3) The Department of Defense generally maintains a significant leased presence near military bases, increasing the greater concentrations of federal leases in cities like Huntsville, Alabama (US Army Redstone Arsenal), Norfolk, Virginia (U.S. Navy Atlantic Fleet HQ) and Quantico, Virginia (US Marine Corp Training Center).

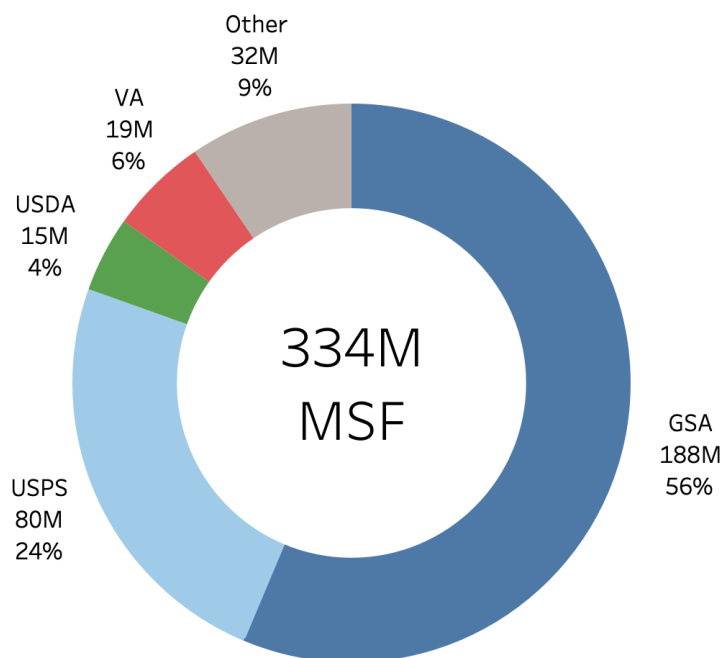
Washington, DC is the federal government “headquarters”. The Washington, DC metro area contains only about 2% of leases, but about one-fifth of leased square footage. Among large leases (100,000 RSF and larger) nearly 50% are located in the Washington, DC metro area.

This explains, in part, the heightened concentration in the Washington, DC area for government investment firms such as Boyd Watterson, NGP, Office Properties Income Trust and USAA. USAA Real Estate Company, which exclusively invests in a narrow tranche of newer and larger assets, has three-fourths of its federal property holdings in the National Capital Region.

Source: Federal lease inventory data (various agencies); Colliers International

The U.S. General Services Administration Is the Largest Lease Contracting Agency—But Not the Only One

Federal Inventory



Many federal-sector investors use the terms “GSA-leased” and “Government-leased” interchangeably. That is because the U.S. General Services Administration (GSA) is the agency established for the express purpose of providing real estate services to other Executive Branch agencies.

GSA contracts for slightly more than half of the total square footage leased by the federal government. Other agencies lease space using statutory or delegated authority. Statutory authority is leasing authority granted by law, though in some cases, that contracting authority is conditioned, usually limiting the non-cancelable term. Delegated authority is contracting authority delegated to agencies from GSA. GSA generally only delegates its leasing authority for special use properties (ex. VA medical centers), remote locations (ex. park ranger stations) or small leases less than 20,000 RSF.

One reason GSA is so significant is that it controls the Federal Buildings Fund (FBF). This revolving fund allows GSA to enter into long-term, non-cancelable lease contracts. Most other agencies must adhere to the Anti-Deficiency Act, which restricts agencies from entering into multi-year contract obligations in the absence of congressional appropriations. Since congressional appropriations are issued annually, most

federal contracts, of all types, are generally structured as a series of one-year terms, or they allow for cancellation rights. Yet, the FBF allows GSA to execute non-cancelable lease contracts up to 20 years in length.

When GSA executes leases with property owners, it then “subleases” them to the tenant agencies. These agencies pay rent into the Federal Building Fund each month and GSA, in turn, pays rent to its lessors. Because GSA executes leases for most of the rank-and-file properties in the federal inventory, and because it can execute non-cancelable leases, most investor focus has traditionally been on GSA-leased assets

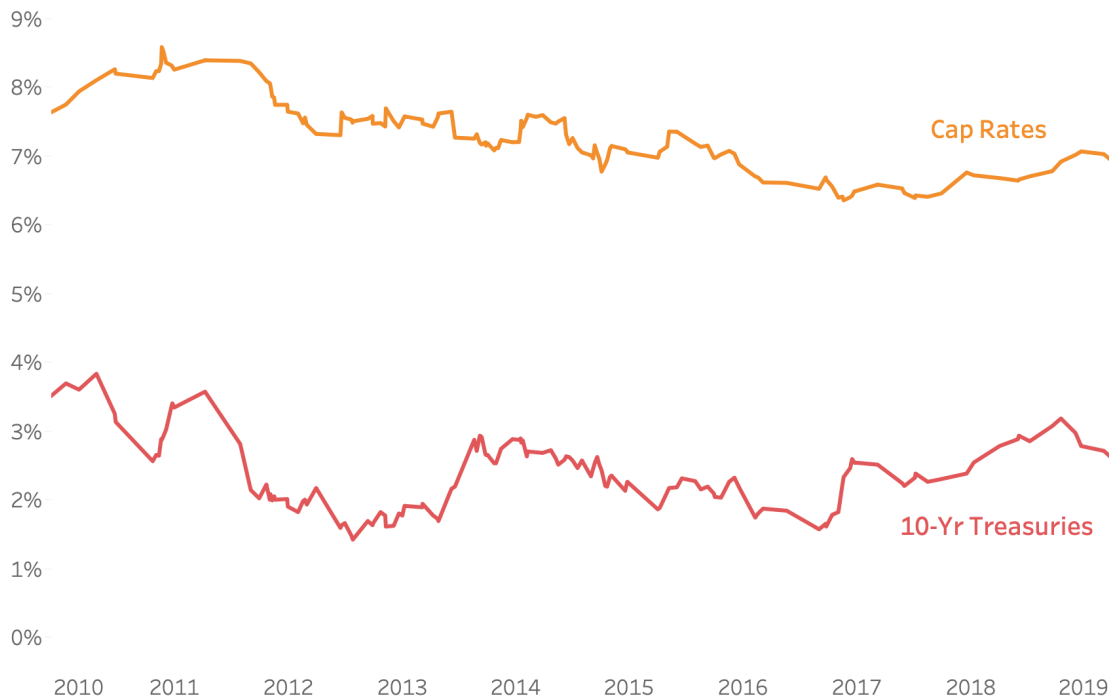
Certain other agencies have statutory authority to enter into multi-year non-cancelable contracts. Also, agencies using delegated authority (which is backed by the FBF) can enter into long-term non-cancelable leases, but this authority must be approved by GSA.

Among the five largest federal property investors, 89% of their federally leased space is contracted with GSA.

Source: Federal lease inventory data (various agencies); Colliers International

Federal Properties Trade at a Substantial Yield Premium to U.S. Treasuries

Cap Rates vs 10-Year Treasury Constant Maturity Rate



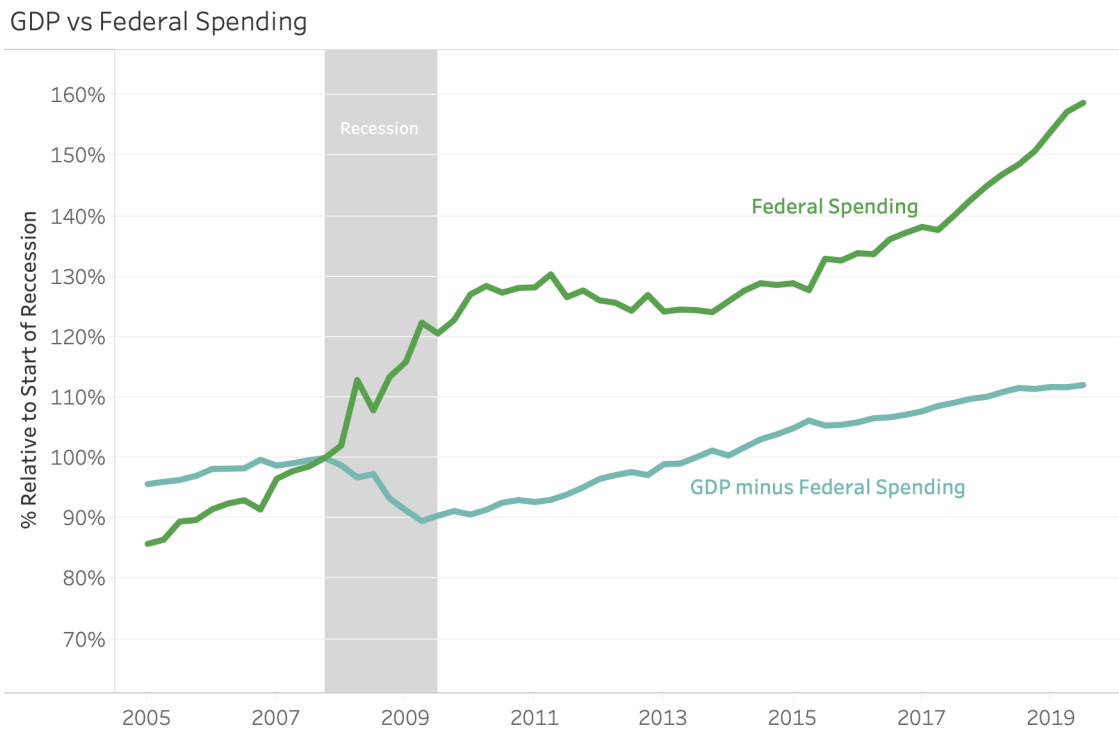
Federally leased real estate generates higher yields than U.S. Treasuries, even though both assets are backed by the exact same credit (leases are signed in the name of the "United States of America").

In the graph above, the red line shows yields for 10-Year U.S. Treasuries. The orange line shows cap rates for federally leased property sales that are i) $\geq 85\%$ leased to the federal government, and ii) have at least 10 years of remaining lease term.

Though the two asset classes have different risk and liquidity characteristics, both are backed by United States of America credit. Yet, the indicated yield spread between 10-year Treasuries and 10-year leased federal properties has ranged from 371 to 620 bps over the past decade.

Source: St. Louis FRED; Colliers International

Federal Spending Outperformed the Economy Through the Great Recession



The federal government acts countercyclically in a number of ways. Among them, federal spending tends to increase during recessions. This was proven to be especially true in the Great Recession when the federal government applied Keynesian principles to boost economic growth by increasing federal spending. Increases in federal spending occurred as a result of “automatic stabilizers” (ex. welfare and unemployment insurance programs) and through stimulus spending.

The graph above is established such that the two indicators are aligned at the start of the Great Recession in December 2007 so that the subsequent percentage change is clearly

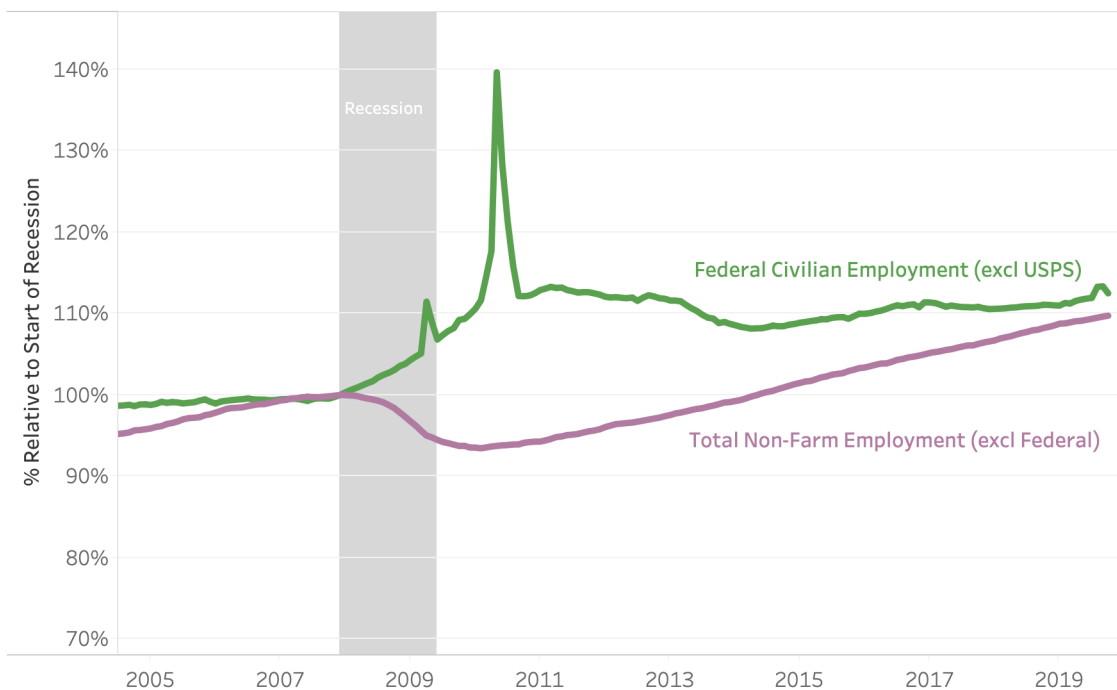
indicated. During the recessionary period, GDP (net of federal government spending) decreased 10% while the federal spending component increased 20%.

While federal spending and leased inventory growth are loosely correlated in the near term, there is little doubt that the spending increase shored up demand for federal real property.

Source: St. Louis FRED; Colliers International

Federal Employment Outperformed the Private-Sector Through the Great Recession

Federal vs Non-Federal Employment



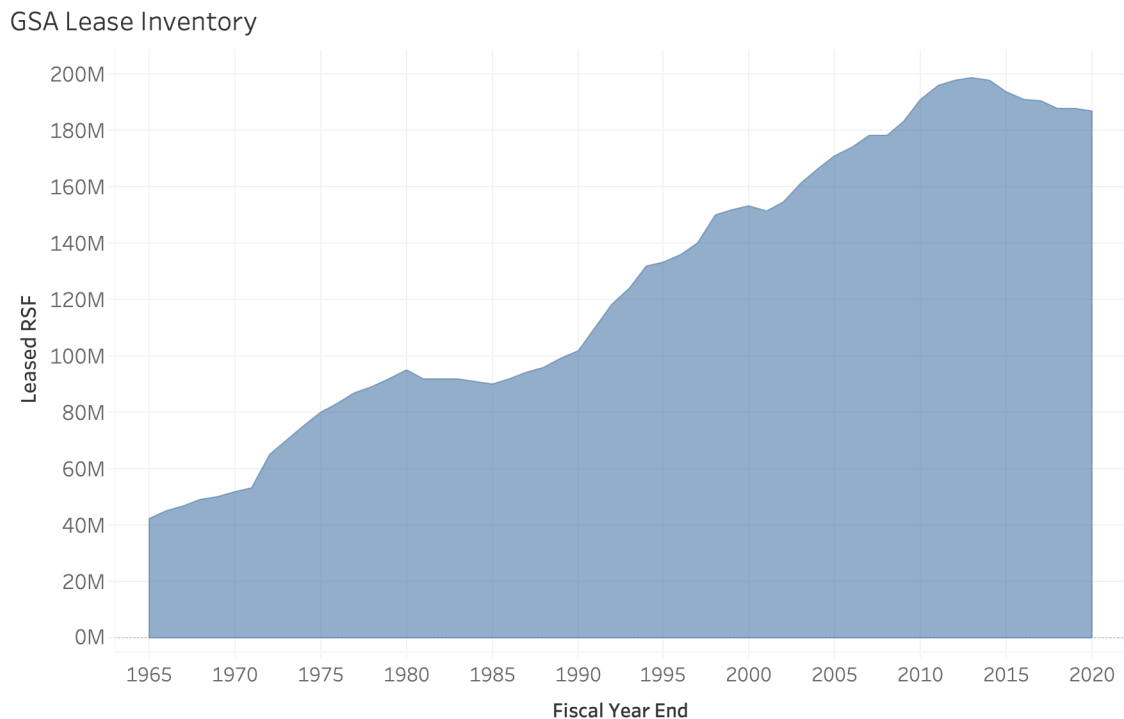
Federal civilian employment increased during the Great Recession, another way that the federal response to the economic downturn was countercyclical.

Like the previous graph, the two indicators shown above are synced to the start of the Great Recession in December 2007 so that the subsequent percentage change is clearly indicated. The green line shows federal civilian employment (exclusive of U.S. Postal Service workers). The purple line shows the civilian non-farm employment trend, exclusive of those federal workers shown separately.

Federal employment improved during the Great Recession. Part of this was a direct result of staffing increases to implement stimulus programs and part was simply due to the fact that federal employment is generally immune to economic downturns.

Source: St. Louis FRED; Colliers International

The GSA Lease Inventory Has Grown 4X in the Past Half Century



GSA's leased space inventory has increased steadily through most of the last half-century from approximately 42.5 MSF in 1965 to its peak of 198.6 at the end of 2012. From that point, the inventory has been declining and, though the reduction (11.5 MSF) has been fairly modest, it marks the greatest inventory reduction in the recorded history of this leased space metric.

During this same 1965-2019 period, federal civilian employment has remained relatively static. Federal civilian employment (excluding the U.S. Postal Service) was 2.34 million full-time equivalent employees at the end of fiscal year 2019. Fifty years earlier it was 1.89 million employees. Though there have been some modest up and down fluctuations in the interim, federal employment never exceeded 2.32 million employees (except with the addition of temporary employees hired temporarily for the decennial census) and it never fell less than 1.86 million employees. Meanwhile, as a percentage of *total* civilian employment, federal employment is hovering near its lowest point ever.

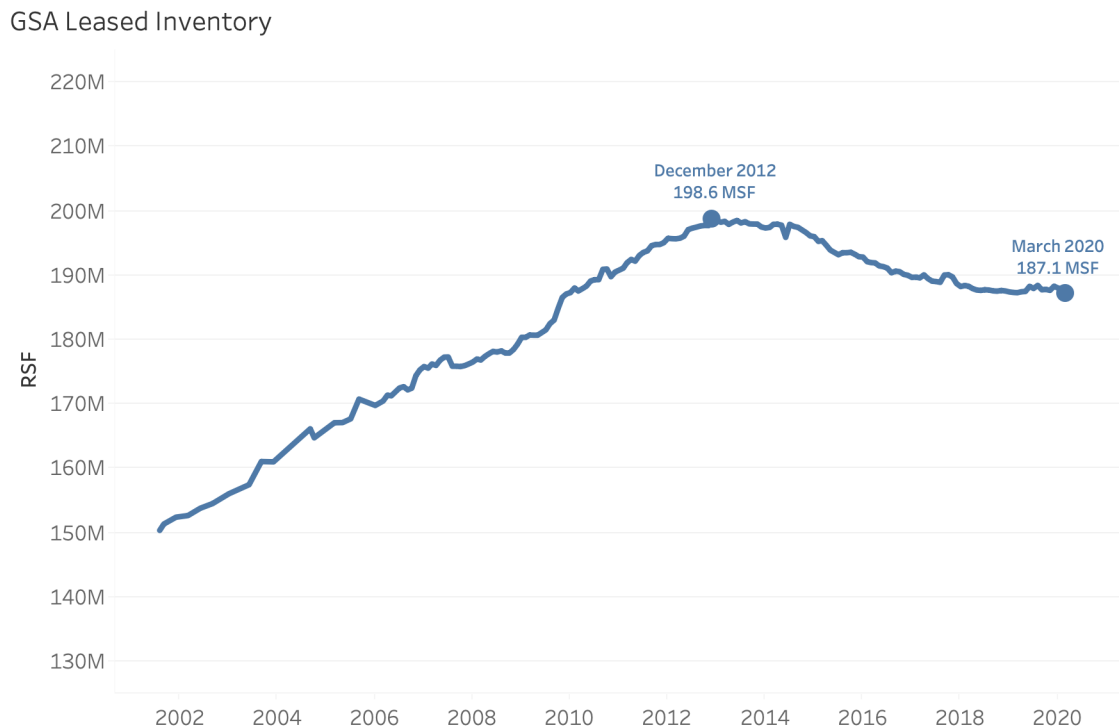
Reasons for the long-term growth in the leased inventory are not entirely clear but there are probably a variety of

contributing factors. Chief among them are the following: 1) While the ranks of federal employees have remained static, the contractor workforce has grown, and many of those contractors are embedded in federal leased space; 2) Over time, leasing authority, which had been available to a variety of agencies, has been increasingly consolidated under GSA's authority, growing GSA's inventory relative to the rest of government, and; 3) Funding for new federally owned buildings has been perpetually constrained, driving demand to leased space.

Regarding this final point, the GSA owned inventory has been relatively static over the past several decades. In fact, the leased inventory surpassed the size of the owned inventory beginning in the mid-2000s. GSA currently owns about 180 MSF of space in the United States. (Note: GSA's owned inventory is only a portion of the federal total, the federal government owns a total of 2.8 BSF of buildings nationwide, most of them on various military installations).

Source: U.S. General Services Administration (GSA); Colliers International

The GSA Leased Inventory Has Been Shrinking Since 2012



The line graph above illustrates the GSA lease inventory trend since 2002 (we use GSA as a proxy for the broader federally leased inventory because only GSA provides trend data). Based on recent figures, the GSA inventory is 187.1 MSF, which is almost an 11.5 MSF reduction from peak, or 5.8%. That is a modest decline of less than 1% per year, but it probably understates the true rate of inventory reduction in two ways: 1) Roughly 1.5 MSF of short-term Census leases have been executed in the past two years and they are temporarily buoying the inventory stats, and; 2) Various agencies with independent or statutory leasing authority are ceding that authority to GSA, causing leases to be shifted into the GSA lease inventory. So, while it appears as though the downsizing trend has leveled off, it really has not, though it may be slowing.

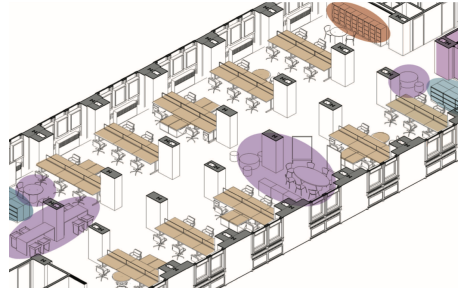
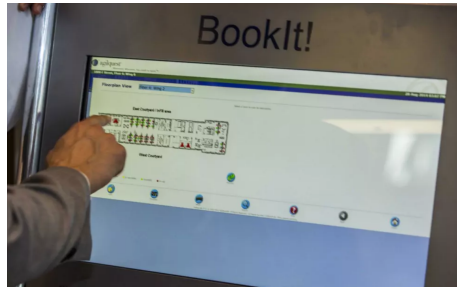
Nonetheless, the reasons for downsizing are not due to an actual reduction in space demand—employment and spending

are stable or increasing. Rather, the reduction is due to two mandates issued by the Office of Management and Budget (OMB): Namely the *Freeze the Footprint* (2012) and *Reduce the Footprint* (2015) memorandums.

The *Freeze the Footprint* mandate required that agencies freeze their total leased and owned real property inventory sizes at no higher than the FY 2012 level. *Reduce the Footprint* further required that agencies develop plans for consolidation and realignment that would yield opportunities for real estate cost reduction. The effect of these mandates has been to force an overall reduction in the GSA lease inventory.

Source: U.S. General Services Administration (GSA) lease inventory data, March 2020; Colliers International

Downsizing Is Occurring Through Workplace Reconfiguration



The Federal Government is not getting smaller, either by decreased spending or employment. So how is it achieving downsizing? The reduction is occurring through workplace redesign to increase space utilization.

In some instances, this workplace redesign simply entails conversion of enclosed offices to workstations, or the reduction of workstation sizes. Yet, far greater space reduction is being achieved through workplace reconfiguration to accommodate mobile work practices.

The graphics above illustrate mobile work environments built to accommodate federal agencies. These workplace configurations eschew offices and traditional workstations for “bench” style workstations that may be reserved by federal employees during those times they come into the office.

This trend towards mobile work can be traced back to the *Telework Enhancement Act of 2010*, which made slightly more than half of federal civilian employees eligible for telework. Increasingly agencies have been embracing this mandate as a

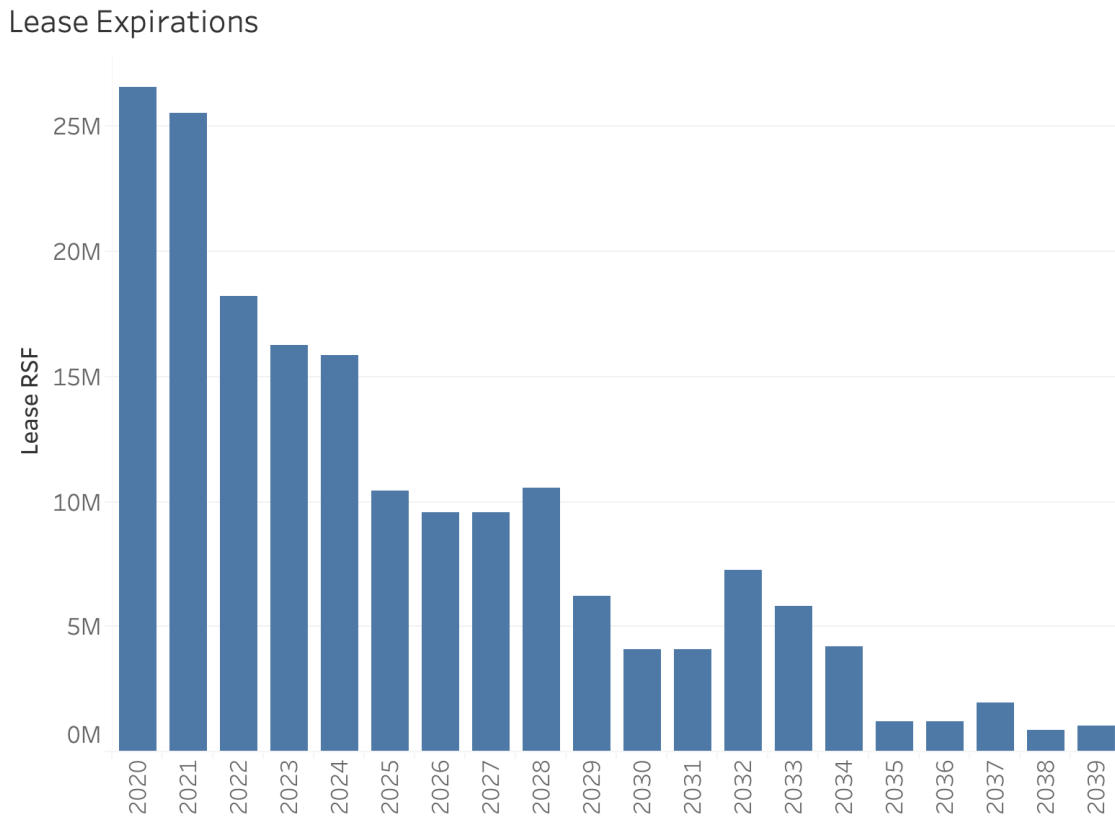
means by which to achieve OMB mandated goals to reduce their real property inventories and reduce costs.

As an important final note, the pandemic may disrupt or reverse this trend. So far, GSA has provided no guidance on how it will manage future space needs and whether it will alter this type of configuration. The PBS Commissioner in public comments earlier this year noted that GSA makes “30-year leasing decisions,” the implication being that it must think about its needs well beyond when the pandemic abates, either through treatment, vaccine or herd immunity.

Nonetheless, the federal government’s sole focus on improving space utilization may now be balanced against other factors that could halt inventory decline. On the other hand, the pandemic has provided a great testing lab for work-from-home strategies and it’s likely that, post pandemic, many more federal workers will continue working from home, at least part time.

Graphics: U.S. General Services Administration (GSA)

Due to the Persistent Pile-Up of GSA Lease Expirations, Half Have Remaining Term of Five Years or Less



Workplace reconfiguration takes time for planning, it requires budget approvals and, in some cases, it forces difficult cultural change. These are factors that have contributed to a persistent backlog of GSA lease expirations.

The graph above shows the square footage of GSA leases slated to expire in the next 20 years, which is the maximum term allowable for GSA leases. It is interesting to note that 29% (52 MSF) of GSA leases expire in next two years, and 52% (102 MSF) expire in next five years. Logically, therefore, most GSA lease are short term.

This “bow wave” shape has persisted for at least a decade and is due to the fact that GSA repeatedly executes short-term extensions, rolling leases forward while GSA and the tenant agencies determine their long-term needs. A recent 10-year analysis by Colliers Government Solutions found that, at base lease expiration, 51% of GSA leases were extended short-term or went into holdover status for a period of at least three months and, frequently, two to three years.

Another factor contributing to these short-term extensions is that GSA, as the contracting agency for these leases, lacks the

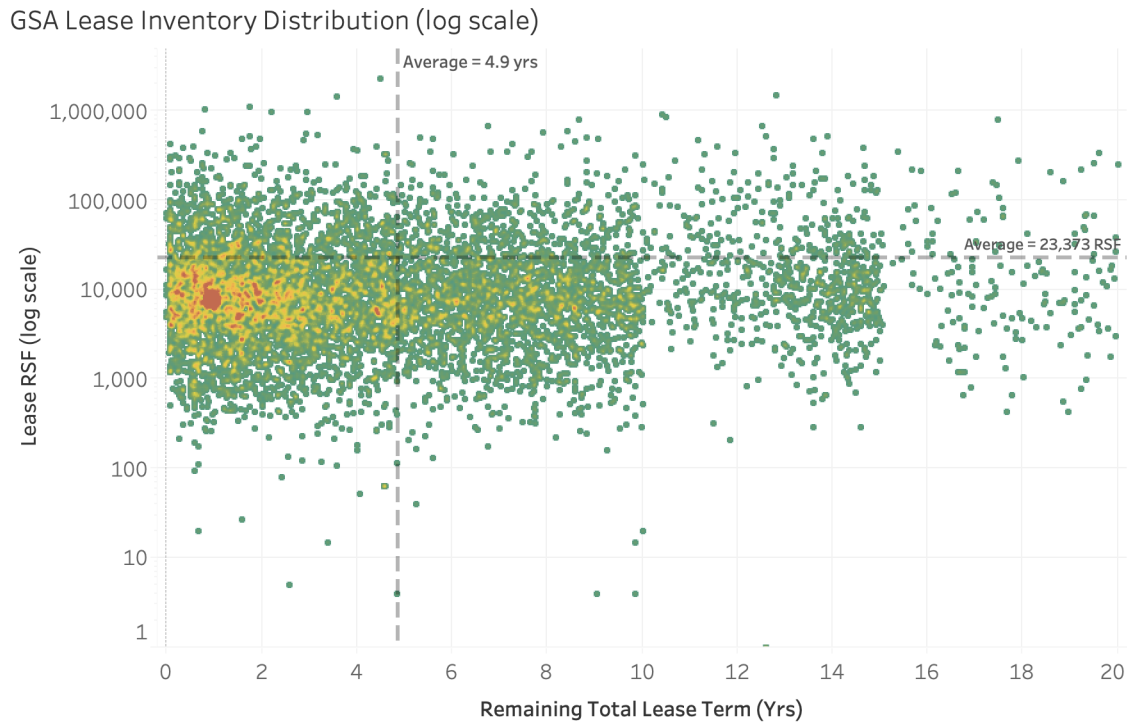
workforce capacity to execute enough new leases every year to make headway against the backlog.

A 10-year study conducted by Colliers Government Solutions found that GSA successfully executed an average of 15.2 MSF of new leases annually (as opposed to lease extension amendments). In its best year, GSA executed 19.8 MSF of new leases, but even this effort would be insufficient to handle the leases expiring in the next two years.

In an effort to address this backlog of lease expirations, GSA is leveraging private-sector brokers to represent the federal government in lease transactions, and the agency is attempting to streamline the leasing process through web-based lease offer tools that could accelerate the cycle time to complete leases.

Source: U.S. General Services Administration (GSA) lease inventory data, October 2019; Colliers International

The GSA Lease Inventory Leans Heavily Towards Smaller Leases with Short Remaining Lease Terms



The GSA lease inventory currently consists of 8,165 leases totaling 187.1 MSF of space. These leases range in size from small parking and storage leases all the way to the 2,386,940 RSF Patent and Trademark Office (PTO) headquarters lease in Alexandria, VA.

The bulk of GSA leases are small, with the average lease size at just 23,373 RSF. Conversely, there are only 320 GSA leases currently in the United States that are 100,000 RSF or larger, though they comprise 41% of the GSA portfolio square footage.

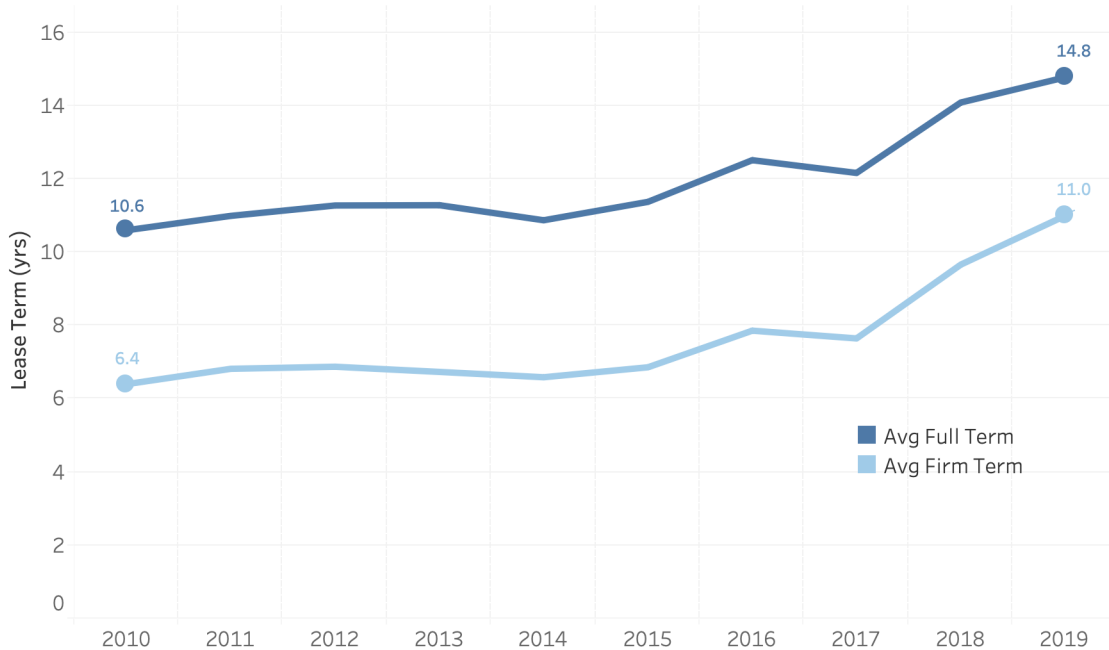
The remaining lease term on the bulk of GSA facilities is relatively short. The average remaining lease term across all GSA leases is 4.9 years, suggesting that half of all leases are approaching their expiration dates.

This high volume of short-term leases suggests the possibility that there could be a growing number of long-term leases in the near future, as replacing leases are executed, yielding an improving number of long-term leased assets.

Source: U.S. General Services Administration (GSA) lease inventory data, March 2020; Colliers International

GSA Lease Terms Are Getting Longer

Lease Terms as Requested in Pre-Solicitation Notices
Average Total and Firm Lease Term (Years) by Posting Date



One of the positive indirect results of cost reduction efforts and downsizing is they have guided the federal government to engage in longer term leases. Workplace reconfiguration costs more money and federal agencies need to access landlord-paid tenant improvement allowances to help pay for construction of these redesigned offices. Also, the federal government—especially GSA—is pushing for long-term leasing to achieve lower rents, an important component of the government’s overall efforts at cost reduction.

The effect of these initiatives is evident in this graph. Each time GSA commences a lease procurement it posts a public notice on a central procurement website (now named the System for Award Management). These pre-solicitation notices state the intended term of the lease that GSA sought to acquire, and Colliers analyzed this data for more than 2,000 postings to develop the trend lines shown above.

Procurement criteria posted in the last four years demonstrate that GSA has been seeking leases with longer

terms. Looking at 2016-2019, where the requested terms are growing, this represents about 8.8 MSF of lease requirements annually that are 10 years or longer. That volume is sufficient to start having an impact on the overall average lease term in the GSA inventory.

These pre-solicitation notices are a leading indicator because it can take two or three years from when pre-solicitation notices are issued until lease contracts are executed, space constructed and leases commenced. Therefore, this data illustrates the leading edge of a developing trend.

Because of this trend more investors, like Boyd Watterson, are willing to purchase short-term leased properties in anticipation of creating value through the renewal process.

Source: Federal Business Opportunities (fbo.gov); System for Award Management (sam.gov); Colliers International

The 10 Largest Property Owners Control Almost One Quarter of the GSA Lease Portfolio

Rank	Investor	Federal RSF ¹
1	Boyd Watterson	10,061,988
2	Easterly Government Properties	6,540,832
3	Office Properties Income Trust	6,273,278
4	NGP	5,102,065
5	USAA Real Estate Company	4,735,808
6	Corporate Office Properties Trust (COPT) ²	4,065,000
7	JBG Smith ³	2,685,862
8	MetLife Real Estate Investments	2,551,226
9	LCOR ⁴	2,386,940
10	Brookfield Property Partners	2,300,253

1 Square footage only includes leases where the term has commenced

2 Federal RSF as reported by COPT in 9/30/19 SEC filing

3 Includes holdings of former JBG Companies executives

4 LCOR is asset manager for a syndicate of high net worth owners

Top 10 owners control more than 46.7 MSF of the total federal inventory. Relative to the entire 334 MSF federal lease inventory, these ten investors control a 14% of all federal space nationwide. Boyd Watterson, which is the nation's largest owner of federal-leased properties, controls about 3% of the federal inventory.

However, relative specifically to the GSA lease inventory, it is clear that ownership has begun aggregating substantially. The top ten owners of GSA-leased properties, which includes the top five investors listed in the chart above, own one-fifth of all GSA leased space (a subset of the federal space inventory).

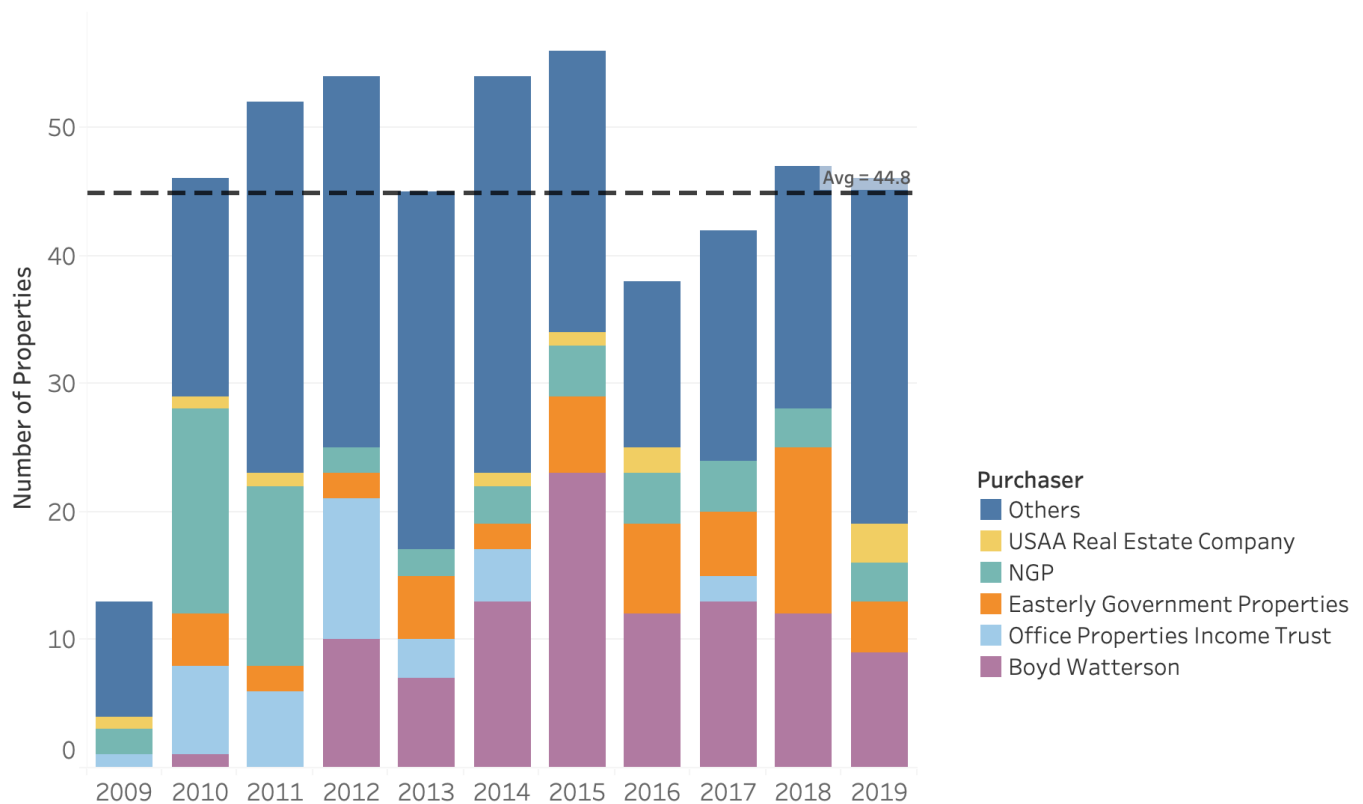
Among those buildings that are "single tenant" GSA-leased (which we define as >=85% leased by GSA tenants), the top 10 investors control more than 30% of all leased square footage.

This aggregation trend has continued over the past several years as the largest property owners amass any ever-greater proportion of the federal-leased property inventory.

Source: Colliers International

The Five Most Active Buyers Generally Purchase More than Half of the Federal Properties Sold Each Year

Transactions ($\geq \$5M$, $\geq 85\%$ Federal Tenancy)



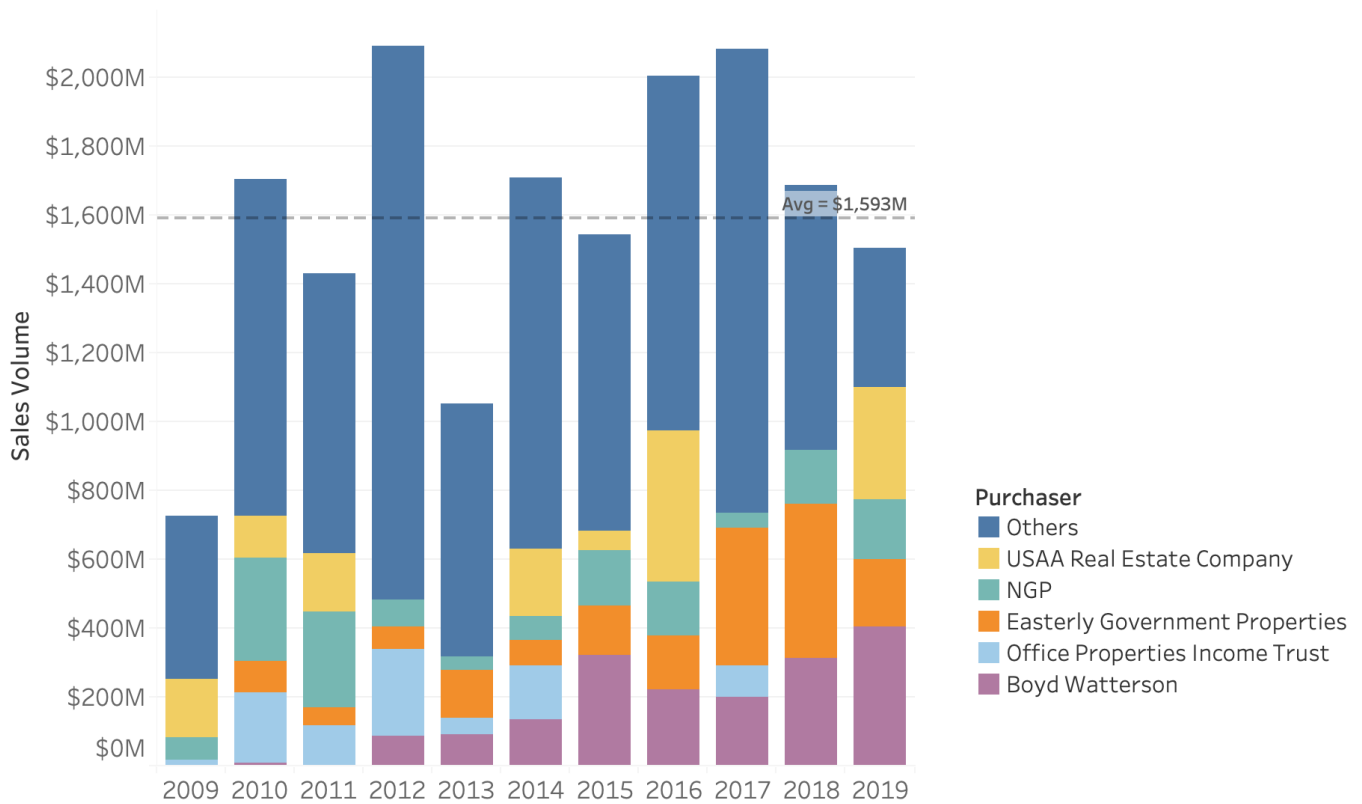
The five largest federal property owners have also been the five most active investors over the past decade. Of 493 recorded sales of government-leased buildings from the end of the Great Recession, beginning in 2009 through 2019, 51 percent were purchased by just five investors.

Since its formation in 2012, Boyd Watterson's government investment funds have been, overall, the most active purchaser of federal-leased properties.

Source: Colliers International

The Top Five Property Investors Now Account for More than Half of Federal Property Purchase Volume

Sales Volume (>=\$5M, >= 85% Federal Tenancy)



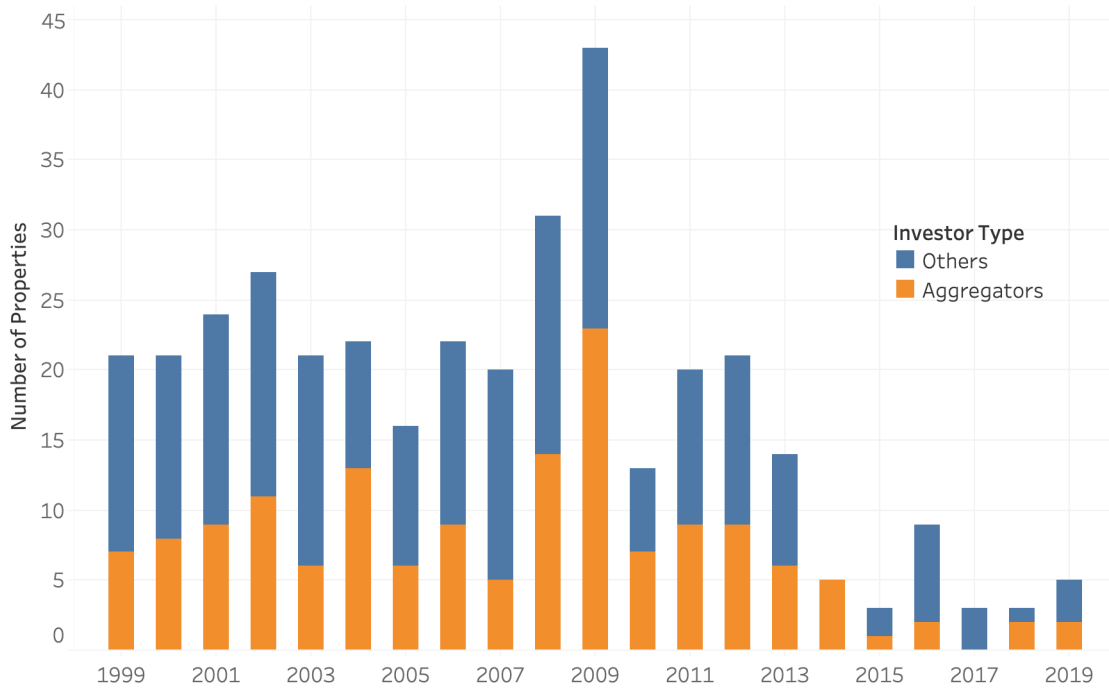
From 2009-2019, Colliers Government Solutions records \$17.9 billion of federal-leased properties trades. Slightly more than \$7.4 billion of that has been purchased by the five most active investors. Those investors have increased their buying volume, especially over the past four years. From 2016-2019,

those same five buyers accounted for 51% of the sales volume traded.

Source: Colliers International

The Five Most-Active Investors Now Own 42% of GSA-Leased Buildings Built Over Past Two Decades

Properties Owned by Year Built/Renov (Property RSF >= 25,000 RSF)



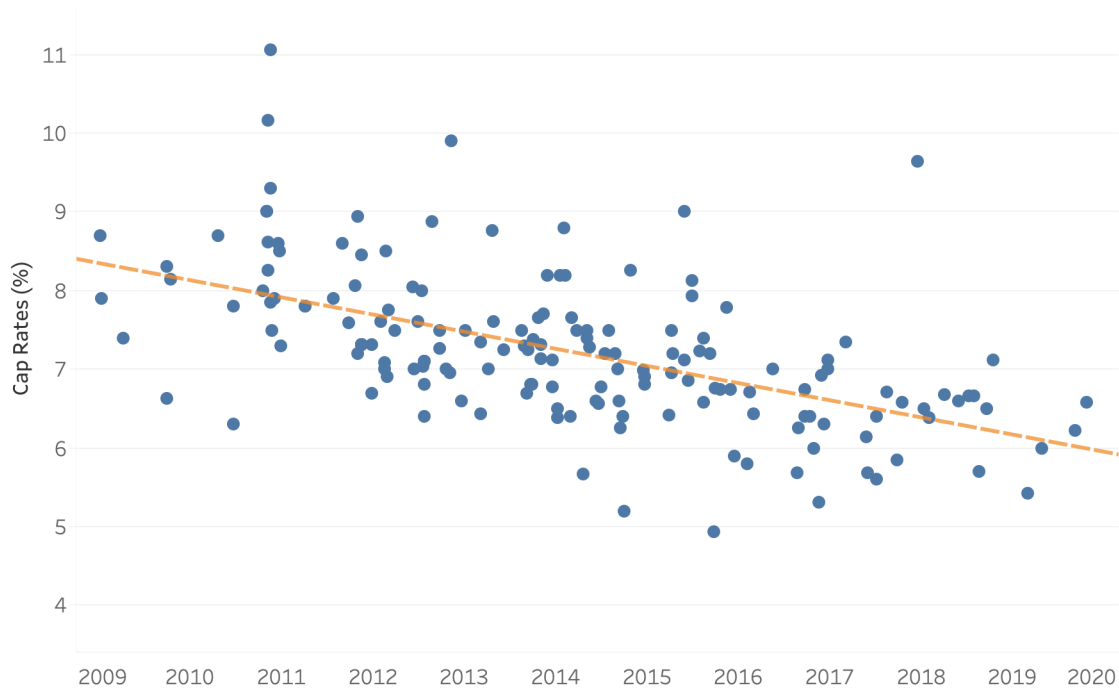
The five most active property investors have been aggressive purchasers of newer high-quality GSA-leased buildings, constructed or substantially renovated in the past two decades. Colliers Government Solutions records 354 such buildings in existence. Of those, 154 are now controlled by five property owners, or 42%.

As the graph also indicates, far fewer buildings have been built in the past decade versus the one before it. Demand for newer buildings has, therefore, intensified, leading investors to now look beyond GSA inventory to find newly constructed buildings, particularly new build-to-suits.

Source: Colliers International

Cap Rates Have Compressed Steadily Over the Past Decade

Cap Rates (10+ Year Leased Properties)



Cap rates for government-leased properties have steadily compressed over the past decade. Some of the significant factors driving this trend have been generally decreasing interest rates, lower equity yield expectations for “safe harbor” U.S. government-leased assets, and an improved flow of capital into the sector, increasing competition. Also, there have been fewer high-quality, long-term leased assets available for purchase.

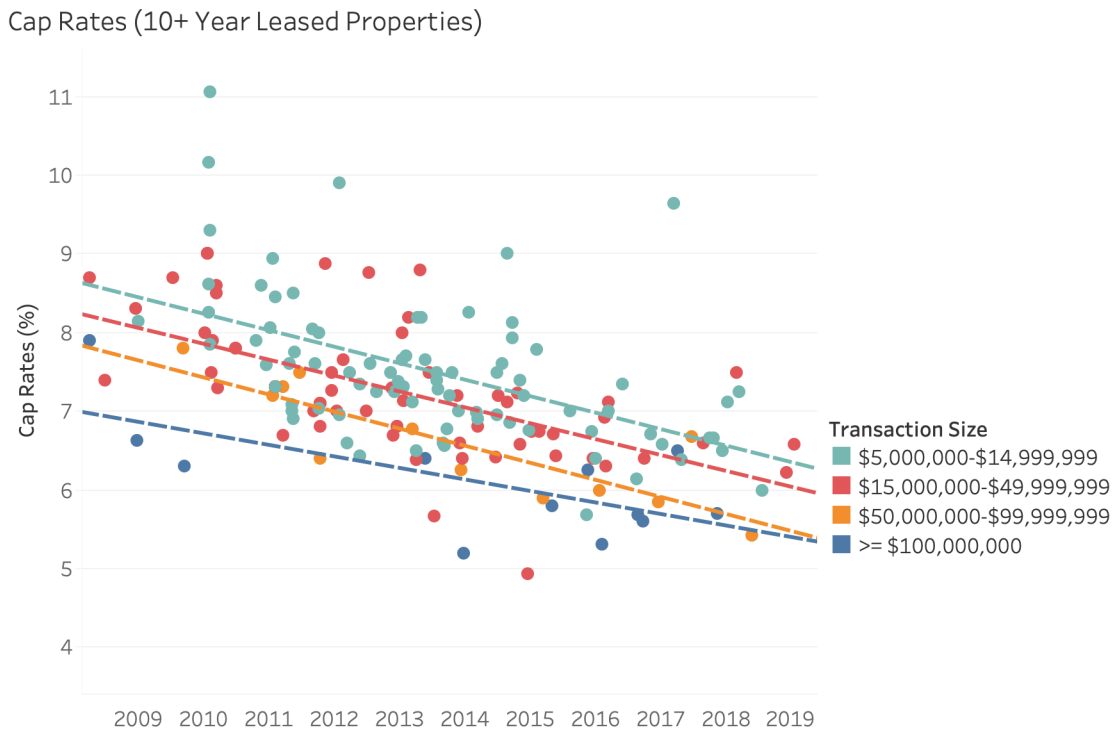
One could argue that cap rates, at least for long-term leased assets, have begun to level off but it seems possible that they could continue lower, even if interest rates do not change, due to growing competition for government-leased real property assets.

Following the Great Recession, cap rates for long term leased government properties were inflated by the relative scarcity of qualified buyers. Since that time cap rates have been driven downward as new investors entered the sector (including Boyd Watterson) and, after 2012, as the availability of long-term leased buildings began to decline causing competition to become even more acute.

From 2009 to 2019, the straight-line trend suggests cap rate compression of about 200 bps, though over the past 2-3 years that trend has begun to flatten.

Source: Colliers International

Larger Transactions Generally Correspond with Lower Cap Rates



Cap rates have compressed over the past decade, as demonstrated on the previous graph. If we divide transactions into size tranches, the data indicate that larger transactions generally trade at lower cap rates.

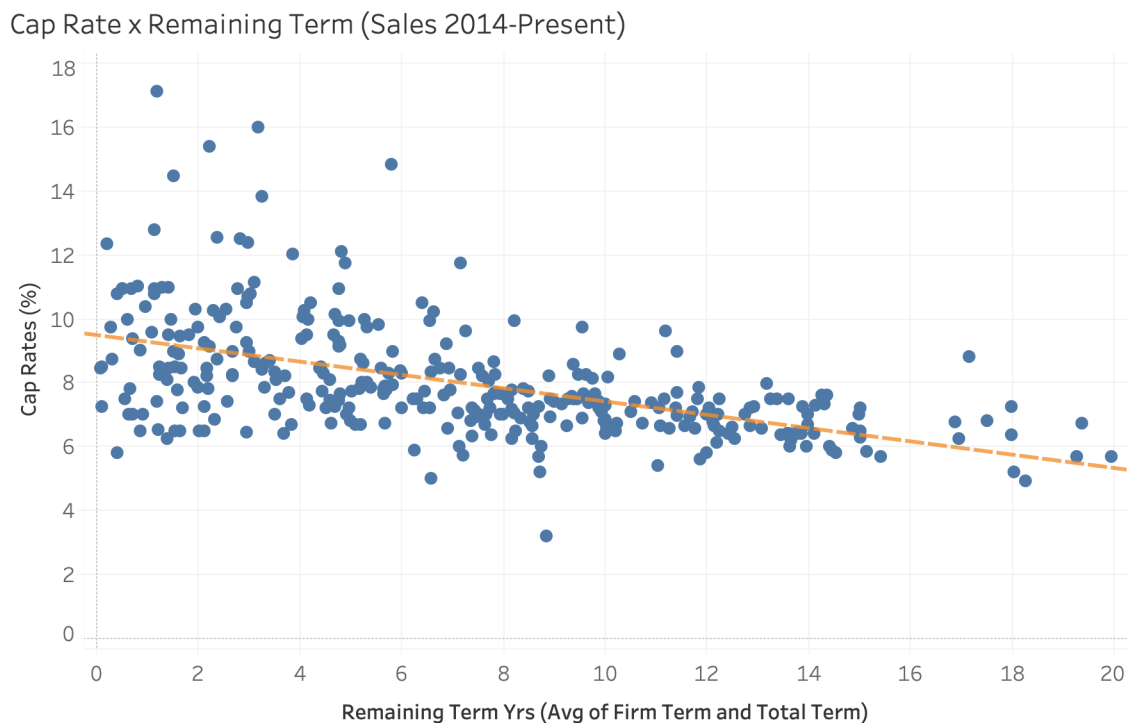
Among the largest deals, lower cap rates are probably influenced substantially by the fact that these deals tend to more often occur in major cities, attracting traditional institutional capital sources in addition to federal property investors. Further, in many of these larger markets the

prospects for long-term appreciation and rental growth are more confidently underwritten.

It's also interesting to note that the spread from the top to the bottom of the cap rate range appears to have narrowed somewhat, probably as the flow of capital into the federal sector has improved, even among smaller property investors.

Source: *Colliers International*

Cap Rate Differential by Remaining Lease Term

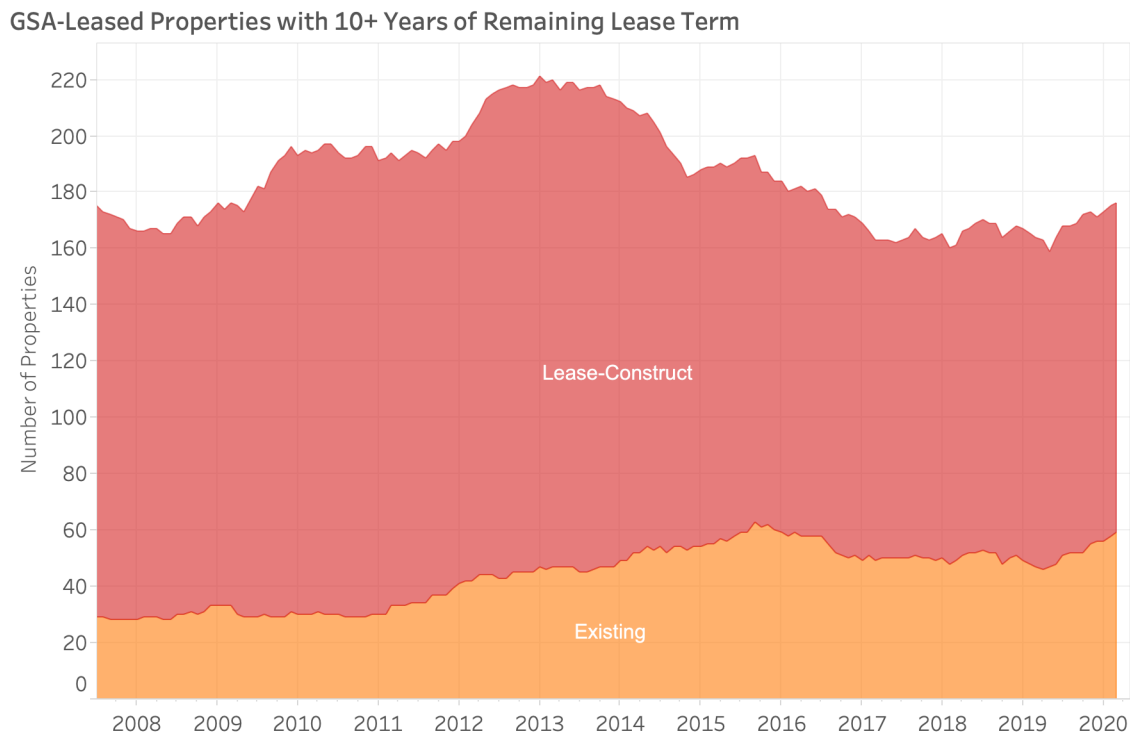


The graph above shows all property sales over the past 5-years of properties that are $\geq 85\%$ leased by federal tenants. As one would anticipate, capitalization rates for purchases of short-term leased properties are significantly higher than for long-term leased assets. Also, because of greater uncertainty around the anticipated renewal terms, including costs, there is greater cap rate variation among sales with shorter lease terms. In these instances, the “go dark” value may influence pricing significantly whereas long-term leased assets demonstrate less pricing variation.

The cap rate differential between assets with 5 years vs 15 years of remaining lease term is roughly 200 bps. There is also far greater variation among transactions with short remaining lease terms as the quality of the real estate weighs heavier in the property valuation. For long-term leased assets the focus remains primarily on credit, narrowing the band of valuation outcomes.

Source: Colliers International

The Availability of Long-Term GSA-Leased Properties Has Declined, But Now Recovering



The graph above shows the total number of buildings at each point in time over the past decade that: 1) had at least 15,000 RSF of GSA-leased space; 2) were at least 85% leased by the federal government, and; 3) had more than 10 years of remaining lease term (without regard for cancellation rights). This analysis focuses only on the GSA-leased portion of the federal portfolio because only GSA provides reliable lease trend, but we believe this is a valid representation of the federally leased property sector on the whole.

We found that the overall number of these “long-term” GSA-leased buildings declined substantially for more than four years from January 2013 to mid-2017. In January 2013, an investor looking for the types of properties described above would find 222 buildings in the U.S. and in June 2017 there were 162, a 27% reduction.

In large part, the selection of prime federal investment properties dwindled due to the fact that GSA has been rarely engaging in new lease-construct (i.e. build-to-suit) projects. These projects have historically yielded the longest leases, typically 15 to 20 years, whereas leases in existing buildings have been shorter. In recent years, however, GSA has been engaging in more long-term leases in existing buildings, including renewals. As a result, all of the growth in long-term leased buildings has occurred among existing buildings. Now these buildings are increasingly the target for investors.

Source: Colliers International

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