William Blair

Equity Research
Global Services

July 11, 2024
Industry Report

Tim Mulrooney +1 312 364 8123
tmulrooney@williamblair.com

Phillip Blee, CPA +1 312 801 7874
pblee@williamblair.com

Luke McFadden +1 312 364 8441
lmcfadden@williamblair.com

Sam Kusswurm, CFA, CPA +1 312 364 8513
skusswurm@williamblair.com

Sabrina Baxamusa +1 312 364 8322
sbaxamusa@williamblair.com

Consumer Services:
The "DIFM" Preference and Growing Reliance on the Pro

Please refer to important disclosures on pages 31 and 32. Analyst certification is on page 31.
William Blair or an affiliate does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. This report is not intended to provide personal investment advice. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments, or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein.

Contents

Introduction: "Do It for Me, Please" 3

Demographic Tailwinds 5

Millennial Homeownership 5

Aging in Place 7

Demographic Tailwinds Summary 8

Consumer Services Markets 9

Residential U.S. Structural Pest Control 9

Landscaping and Lawn Care 11

Interior/Exterior Painting 12

Pool Services 13

Moving and Storage 15

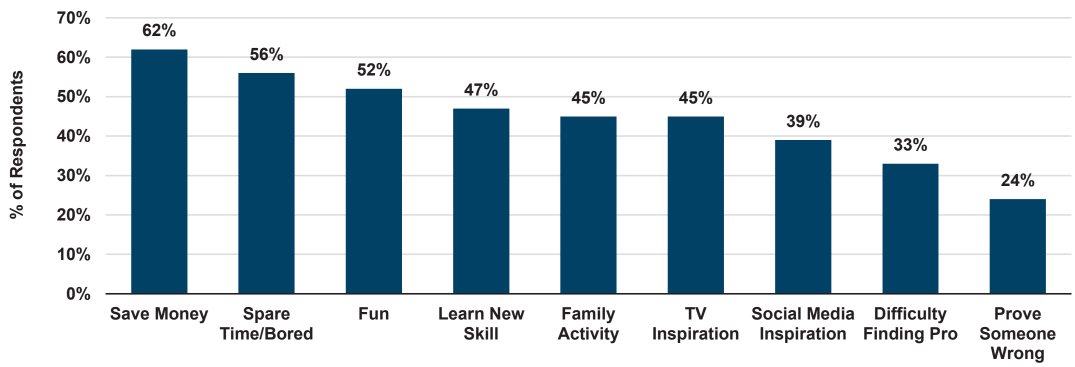
Home Improvement, Renovations, and Design 17

Automotive Services 22

Introduction: "Do It for Me, Please"

In the months following the outbreak of the COVID-19 pandemic, consumers, many of whom were sequestered at or near home, initiated what could be viewed as a do-it-yourself (DIY) renaissance. This was true across services performed both at the home (i.e., residential interior/exterior services) and away from the home (e.g., auto services, car wash, health and wellness). According to survey work conducted by Angi in 2022, 81% of homeowners took on a DIY project during the pandemic for various reasons.

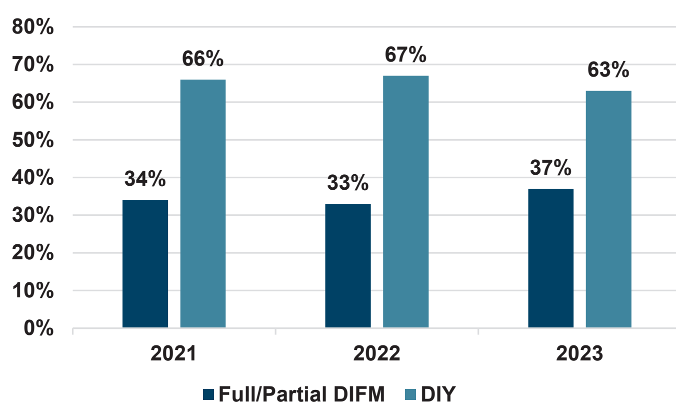
Exhibit 1
The "DIFM" Preference and Growing Reliance on the Pro
Why Homeowners Chose DIY During the Pandemic



Source: Angi

As lockdowns and shelter-in-place orders fade further into the rearview mirror, consumers are increasingly shifting back to do-it-for-me (DIFM) as it pertains to everyday home tasks. In fact, in a study published earlier this year by the Home Improvement Research Institute, 37% of homeowners elected to hire a professional in 2023 for their home improvement project—up from 33% and 34% in 2022 and 2021, respectively.

Exhibit 2
The "DIFM" Preference and Growing Reliance on the Pro
DIY vs. DIFM Homeowner Trends Post-COVID



Note: Project types include plant garden/landscape, interior/exterior painting, and indoor/outdoor structural home replacements/improvements.
Source: HIRI

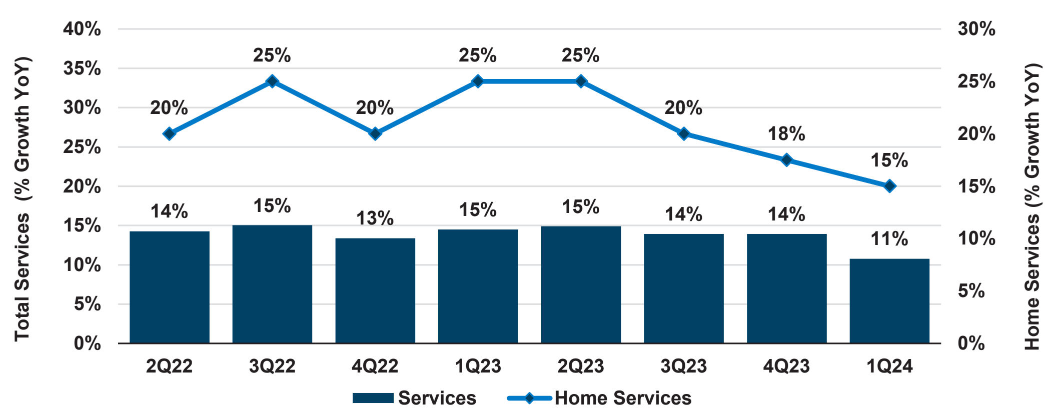
Similarly, the most recent survey from Houzz & Home indicated that utilization of interior designer services returned to its pre-pandemic average of 20% by 2022 and has since accelerated to 24% in 2024. The auto services space has also mostly normalized following the uptick in DIY amid the pandemic where aftermarket auto parts retailers, including AutoZone and O'Reilly, maintained a 2023 DIFM sales contribution some 4% above 2019 levels.

There are a number of secular trends supporting demand for consumer and residential services. Secular trends driving growth across these verticals include favorable demographic tailwinds, a change in consumer preferences and lifestyles, a structural housing supply shortage supporting increased investment in existing homes, and evolutions in the automotive industry. While we outline most of these trends in detail in our residential services white paper published last June, this report primarily focuses on the growing importance of professional service providers as consumers show a greater propensity to outsource common tasks. In short, we expect an increasing reliance on the "pro" channel over the next decade as consumer behavior continues to shift from DIY to DIFM.

There has been a significant amount of capital formation around these themes, enabled by advances in technology and an opportunity to professionalize highly fragmented markets that are primarily serviced by smaller, local mom-and-pop businesses today. In fact, we have observed a material increase in total M&A deal volume in automotive and residential services over the last five years, particularly with financial sponsors.

We have also seen increased investment flows into home and local service channels from online demand aggregators in an effort to support sustained demand for pro services following the pandemic. Over the last eight fiscal quarters, advertising revenue growth in Yelp's services category, which includes various home and local professional services (e.g., plumbing, electrical, auto), has averaged 14%, which is above the 10% average quarterly growth rate in the company's restaurant, retail, and other category over the comparable period. Yelp continues to invest in its broader services category in 2024 in an effort to capitalize on what management sees as a growing market opportunity related to home and local professional service providers.

Exhibit 3
The "DIFM" Preference and Growing Reliance on the Pro
Yelp Services Quarterly Advertising Revenue Growth



Notes:
1) Services category consists of home, local, auto, professional, pets, events, real estate, and financial services.
2) Home services is a subcategory within the broader services category, which includes pro services in and around the home (e.g., plumbing, electrical, landscaping).
3) 4Q23 home services growth rate is a William Blair estimate
Sources: Company reports; William Blair Equity Research

In this report, we outline the DIFM theme in greater detail, with an emphasis on the growing importance of the pro channel across consumer services markets.

Demographic Tailwinds

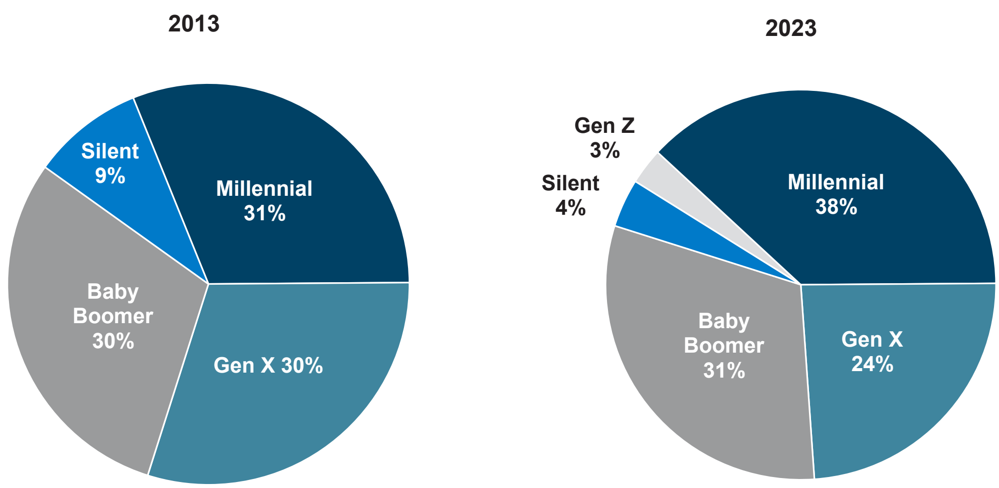
Two primary demographic themes supporting a shift in consumer preference are: 1) the increased rate of millennial homeownership and 2) the growing proportion of older American homeowners who are aging in place.

Millennial Homeownership

A notable domestic trend in recent years has been a meaningful rise in millennial homeownership. This age cohort continues to take share from baby boomers in terms of aggregate expenditures and will continue to grow in importance with respect to consumer preferences. Accordingly, we believe that millennials are a critical customer base to engage with, especially as these individuals continue to form households, establish families, and consume more services.

In the wake of the pandemic, many millennials took advantage of newly implemented remote work trends along with low interest rates to leave urban rental units in exchange for homeownership in the suburbs. Based on "home buyers and sellers generation trends" data collected from the National Association of Realtors (NAR), the percentage of home buyers who were millennials grew from 31% in 2013 to 38% in 2023.

Exhibit 4
The "DIFM" Preference and Growing Reliance on the Pro
Composition of Home Buyer Base by Generation

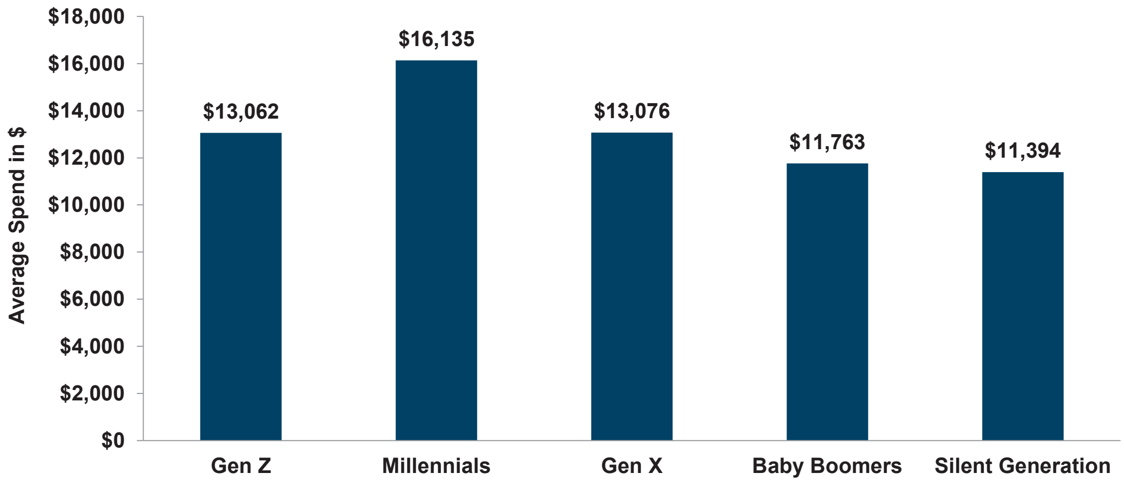


Note: Generational Definitions: Silent Generation b. 1925-1945, Baby Boomers b. 1946-1964, Gen X b. 1965-1979, Millennial b. 1980-1998, Gen Z b. 1999-2011

Sources: NAR and William Blair Equity Research

Preferences of the millennial generation will play an increasingly important role in the market for residential services. On average, millennials invested more than $16,000 across home improvement, maintenance, and repair spend according to the latest State of Home Spend survey published by Angi. This number includes spend on recurring services like lawn mowing and gutter cleaning as well as more structural home maintenance and improvement work (e.g., bathroom/kitchen remodel, HVAC upgrade, window replacement).

Exhibit 5
The "DIFM" Preference and Growing Reliance on the Pro
Average Home Improvement Spend by Generation

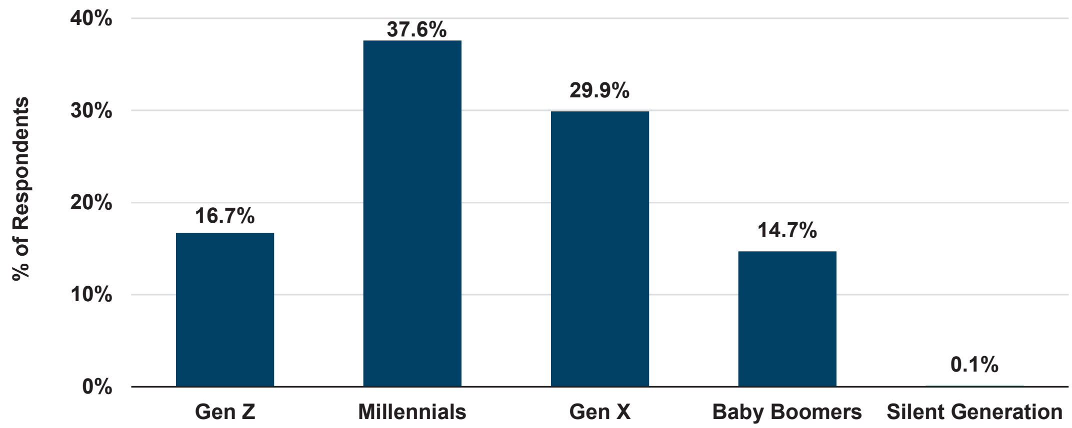


Source: Angi State of Home Spending Survey 2023

While younger homeowners have historically been the most inclined to take on home-related DIY improvement projects, recent survey work from Houzz & Home has shown that 86% of millennials surveyed would likely seek out professional help for their renovation needs. Furthermore, we would expect millennials to increasingly adopt professionalized home improvement services in the years to come, particularly as the share of more complex replacement projects continues to grow as a percent of home improvement spend (e.g., roofing, siding, windows, doors, insulation, carpeting, plumbing, electrical, HVAC), driven by a structural shortage in new home supply and an aging existing housing stock. See the Joint Center for Housing Studies' (JCHS) Improving America's Housing 2023 report for more detail.

Lastly, we believe that millennials are more inclined than previous generations to consume recurring residential services given the degree to which they prioritize convenience and experiences. A 2020 survey of U.S. adults (n=1,066) conducted by Silverback Strategies showed that millennials represented the largest group of respondents who noted a recent purchase of a consumer service (e.g., home cleaning, bug and pest control, landscaping). Given the time-intensive and (occasionally) unpleasant nature of many home-related tasks or projects (cleaning, lawn care, etc.), we expect millennials to consume a growing share of recurring residential services as this generation constitutes a larger percentage of the total homeowner base going forward.

Exhibit 6
The "DIFM" Preference and Growing Reliance on the Pro
Use of Consumer Services by Generation



Notes:

1) Generational Definitions: Silent Generation b. 1928-1945, Baby Boomers b. 1946-1964, Gen X b. 1965-1980, Millennial b. 1981-1996, Gen Z b. 1997-2002

2) Consumer services include home-based services (e.g., gas and electric, home cleaning, bug and pest, carpet cleaning, landscaping, plumbing and HVAC, moving and storage, interior design, construction, and architecture) as well as other services (healthcare, banking, accounting, and real estate)

3) Survey data current as of August 2020

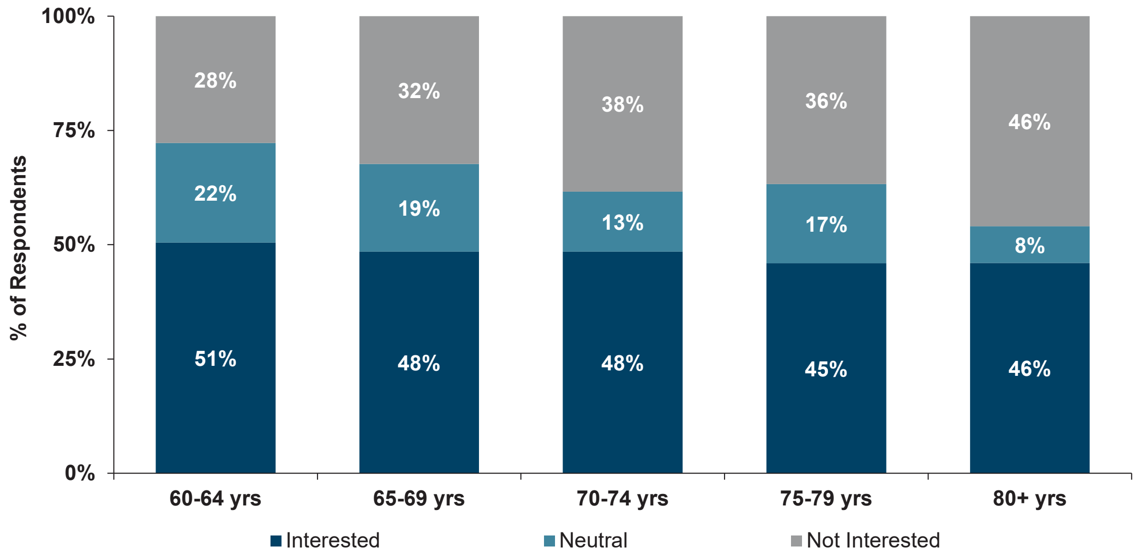
Source: Silverback Strategies

Aging in Place

The other homeowner demographic theme that we anticipate will have a positive impact on the adoption of residential services is the increasing number of older Americans choosing to age in place. The JCHS estimates that the number of households with occupants age 65 years and older is expected to grow from 27 million in 2021 to more than 50 million by 2038. Over the past decade, older homeowners have consistently shown a strong preference toward aging in place versus relocating to an alternative location (e.g., assisted living facility, long-term care community, home of a family member). In four separate surveys conducted by AARP since 2010, older respondents consistently reported a higher preference toward remaining in their current place of residence for as long as possible when compared with younger cohorts.

While acceleration in home health investments has played a critical role in making the preference toward aging in place a legitimate option for many, the structural investments needed to make the homes of older Americans safer are of equal importance. A recent Fannie Mae survey on homeowner confidence around aging in place found that nearly 50% of all individuals age 60 years and older were interested in affordable home maintenance and repair services to improve the feasibility and safety of retiring at home. We expect a growing proportion of these improvement projects, which are meant to make the home more accommodative for older homeowners (e.g., stair lifts, walk-in shower/bath, ramps), to be completed by third-party contractors.

Exhibit 7
The "DIFM" Preference and Growing Reliance on the Pro
Aging Homeowners' Interest in Affordable Home Maintenance Services

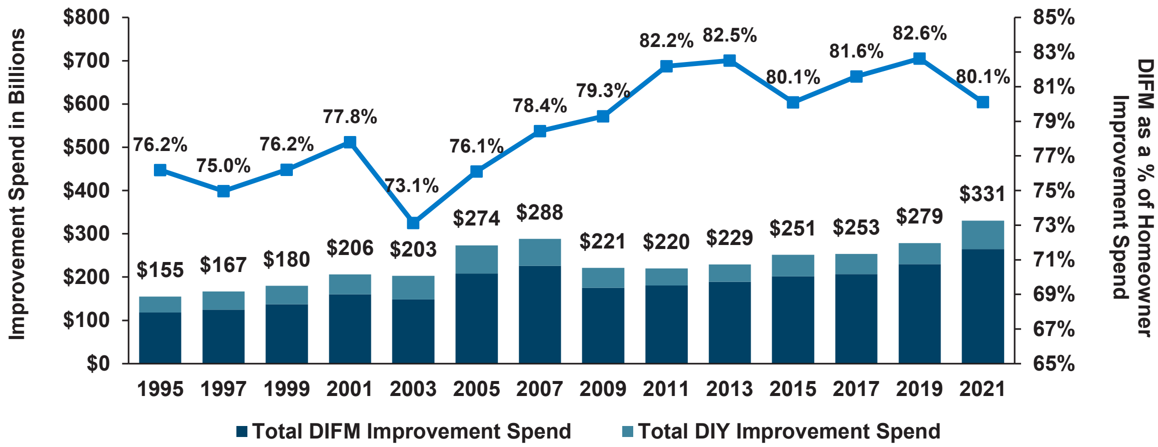


Notes:
1) Question: How interested are you in programs or services regarding your home during retirement?: A home maintenance/repair service designed for retirees that makes home improvements/repairs at a lower cost
2) Figures may not sum due to rounding or because do not know/refused to answer/skipped responses are not shown
Source: Fannie Mae

Beyond the market for remodeling and renovation projects, which tend to be more one-time in nature, we also expect older homeowners to increasingly outsource their recurring home-based service needs. These services include lawn care and landscaping, pest control, house cleaning, handyman work, pool services, snow removal, and gutter cleaning, to name a few. While these tasks have historically been perceived as DIY compatible given the limited degree of knowledge and equipment required to perform the job, increased health-based constraints brought on by age will drive broader adoption of residential services even among legacy DIY homeowners.

Demographic Tailwinds Summary
According to data from the JCHS, the share of DIFM projects as a percentage of total homeowner improvement spend averaged 76% in the decade leading up to the Great Financial Crisis (1997-2007). Between 2009 and 2019, DIFM share rose by roughly 500 basis points to 81%, driven primarily by spend mix (i.e., more complex projects) and a growing share of both older homeowners (who typically spend less on DIY projects) as well as a decline in DIY spend across younger homeowner cohorts. In 2021, DIFM share declined to about 80% as younger homeowners took on more discretionary and replacement DIY projects in the wake of the pandemic.

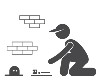
Exhibit 8
The "DIFM" Preference and Growing Reliance on the Pro
DIFM as a Percentage of Homeowner Improvement Spend



Sources: Joint Center for Housing Studies 2023 tabulations of Housing and Urban Development (HUD) data and American Housing Surveys

Despite the uptick in DIY project activity as a percent of total improvement spend during the onset of the pandemic, we note the longer-term trend of DIFM project activity gaining share over the last two decades. We expect momentum within this longer-term trend to continue, with DIFM spend taking a greater share of the overall home improvement market over the next decade. Similarly, we would expect a comparable trend in the market for more recurring services both near and away from home as homeowners increasingly look to outsource their daily needs to professional service providers. This shift will be driven primarily by both demographic tailwinds (i.e., millennial home-ownership and aging in place) and other factors including aging domestic housing infrastructure and shifts in homeowner preferences and lifestyles.

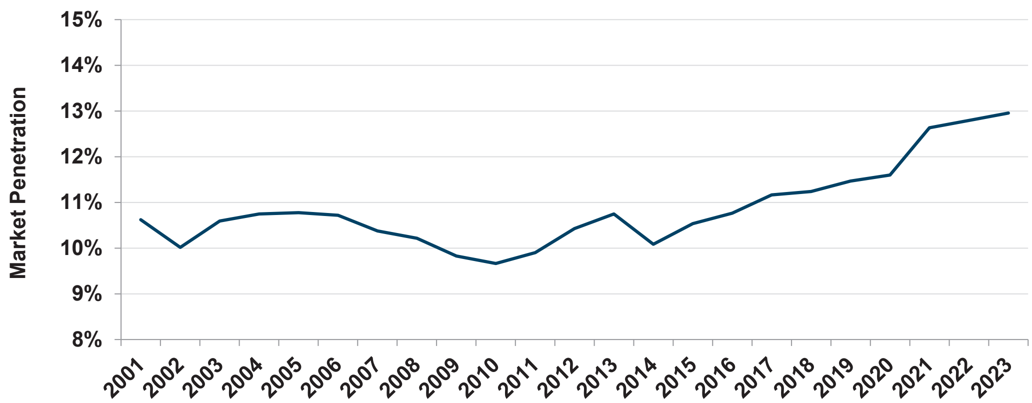
Consumer Services Markets



Residential U.S. Structural Pest Control

The U.S. residential structural pest control market was estimated at roughly $5.4 billion in 2023. With roughly 86 million single-family owner-occupied homes in the United States, we estimate a total market opportunity of $41 billion. This implies a penetration rate of 13.0%, up from 9.7% in 2010. We expect this trend to continue as homeowners increasingly rely on professionals to address pest-related issues around the home, and as pest control generally becomes a more broadly accepted preventive service by U.S. homeowners, rather than being stigmatized as "having a bug problem."

Exhibit 9
The "DIFM" Preference and Growing Reliance on the Pro
Residential Pest Market Penetration



Note: TAM is based on total number of single-family owner-occupied homes in the United States
Sources: Rollins; Terminix; U.S. Census Bureau; and William Blair estimates

In 2022, the National Pest Management Association (NPMA) presented results from research commissioned on consumer buying habits and trends. One key takeaway from this presentation was that 45% of millennials without a current pest control service responded as "likely to hire a pest service on a regular basis in the future." This was notably greater than older generations, including Gen X (37%) and baby boomers (30%).

The largest global pest control company, Rentokil Initial, highlighted in its annual report that the "millennial generation is highly focused on health and wellbeing and vocal about its importance." Similarly, the company lists both low U.S. residential penetration and changing customer behavior as important secular themes driving pest control services market growth.

The second-largest global pest control company, Rollins, recently underscored during its investor day that a "generational shift from a DIY mindset to a do-it-for-me one" should provide medium- to long-term support for the pest control industry. CEO Jerry Gahlhoff, Jr. further said that "as millennials become a larger percentage of homeowners, their preference for do-it-for-me services compared to older generations and their ability to access these services much more seamlessly through search and online connectivity should serve as a tailwind for the industry."

The growing U.S. penetration rate, survey results on consumer buying habits, and secular themes highlighted by large public companies all point to a positive demographic shift in the U.S. pest control market. The millennial generation, with a higher propensity toward DIFM services, should provide a tailwind to the pest control industry as they represent a greater percentage of the homeowner base over the next decade.

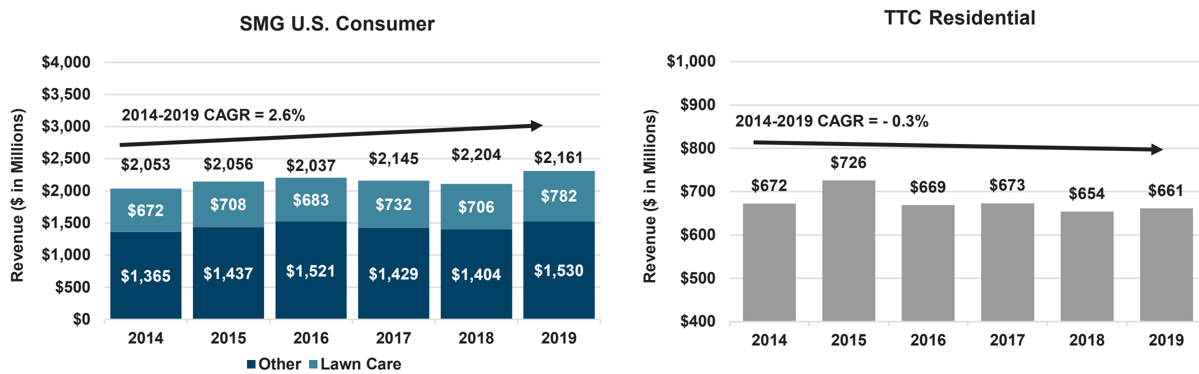
Additional catalysts beyond demographic shifts for greater market penetration include warming temperatures, increasing regulations, growing awareness of pest-related diseases (e.g., Zika virus from mosquitoes, Lyme disease from ticks), newer service offerings (e.g., mosquito, wildlife, tick-and-flea), rise of outdoor living spaces, increased levels of pet ownership, and medical insurance coverage (Medicare Advantage plans now offer coverage on certain nonmedical services such as pest control).

Landscaping and Lawn Care

Similar to pest control, we believe both lawn care and landscaping operators are benefiting from a higher propensity of homeowners to outsource labor-related tasks to third-party service providers. To gather insight into trends around DIY versus DIFM activity in residential lawn and landscaping markets, we analyze the performance of lawn care and landscaping product and equipment manufacturers who target the DIY homeowner in the paragraphs that follow.

From 2014 to 2019, we estimate that Scotts Miracle-Gro's U.S. consumer segment, which is primarily influenced by spending levels of the DIY consumer, grew at an annualized rate of 2.6%. The residential segment of the Toro Company, which manufactures outdoor power equipment for homeowners (walking/riding mowers, snow throwers, trimmers, chainsaws, edgers, etc.) was effectively flat (down 0.3%) over the comparable five-year period.

Exhibit 10
The "DIFM" Preference and Growing Reliance on the Pro
SMG and TTC: Pre-COVID DIY Lawn Care and Landscaping Product Sales

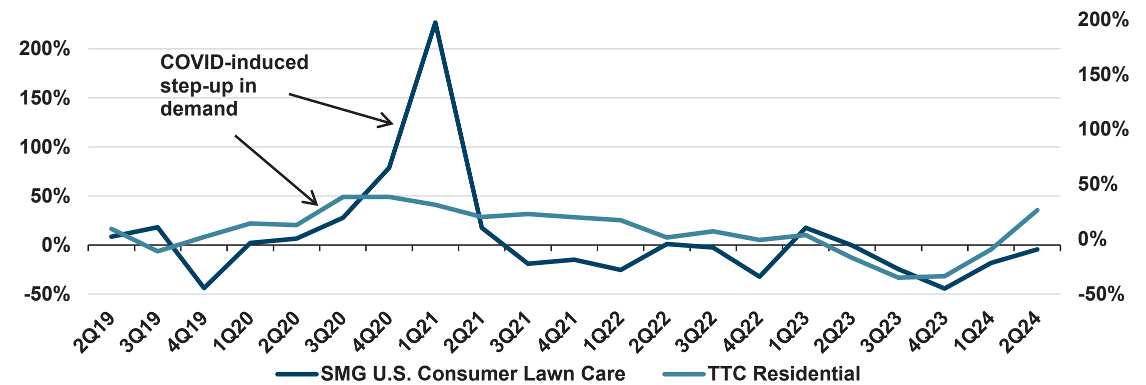


Notes:
1) SMG lawn care includes lawn fertilizer, grass seed, lawn-related weed, pest, and disease control products, and spreaders and other durables; other includes growing media, controls, Roundup, and gardening and landscape
2) TTC residential segment includes walking/riding mower products, snow thrower products, and home solution products (i.e., yard tools)
3) $ in millions
Sources: Company reports and William Blair Equity Research estimates

The pre-COVID flat to low-single-digit growth rates in the DIY-oriented product businesses of Scotts and Toro are both below the midsingle-digit rate of growth for the lawn and garden businesses of big-box suppliers like Lowe's (6.5% CAGR in lawn and garden) and Home Depot (3.5% CAGR in outdoor garden) from 2014 to 2019. The DIY-oriented product businesses of Scotts and Toro are also below the historical industry growth rates for residential lawn care and landscaping services. Based on our conversations with industry operators, these markets have historically grown at a rate of about 3%-4% annually. In our view, this data implies higher growth occurred across the professional services channel during that same time frame.

Beginning in the third quarter of 2020, both Scotts and Toro saw a meaningful step-up in quarterly revenue in their respective residential lawn and landscaping product offerings as each of these businesses benefited from higher levels of customer engagement in DIY-related lawn care and landscaping activities as a result of stay-at-home trends in the months following the onset of the pandemic. In more recent quarters, growth rates in these categories have normalized following the exceptional levels of demand witnessed over the COVID period.

Exhibit 11
The "DIFM" Preference and Growing Reliance on the Pro
SMG and TTC: COVID-Period DIY Lawn Care and Landscaping Product Sales



Notes:
1) SMG U.S. consumer lawn care includes lawn fertilizer, grass seed, lawn-related weed, pest, and disease control products, and spreaders and other durables
2) TTC residential segment includes walking/riding mower products, snow thrower products, and home solution products (i.e., yard tools)
Sources: Company reports and William Blair Equity Research

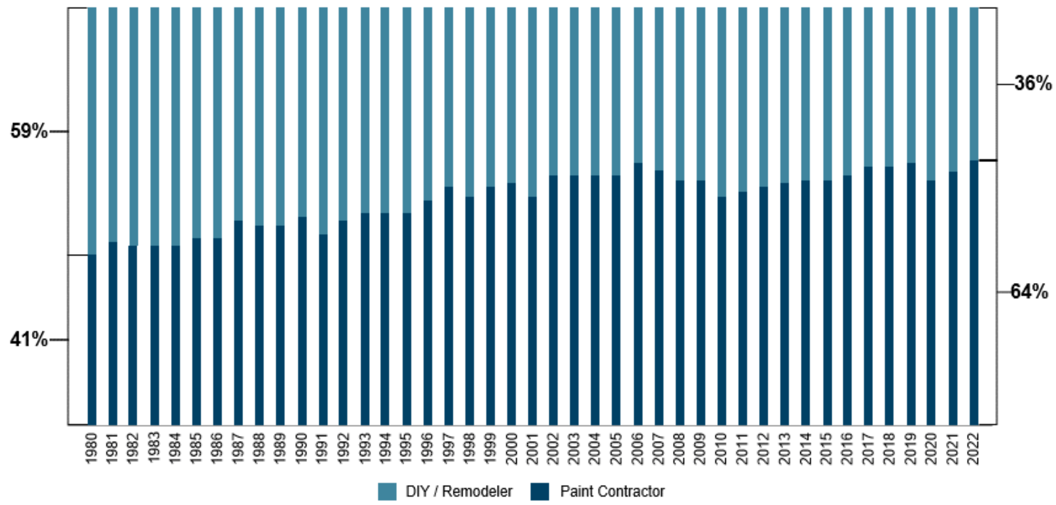
Given the fact that there are currently no publicly traded, residential-focused lawn care and landscaping service providers, performance data during the pre- and post-COVID period for these service providers is limited. However, industry trade journals suggest that 2023 was another strong year for many in the industry. Going forward, we would expect growth in the market for residential lawn care and landscaping services to outpace growth in the market for DIY products in these categories, partly attributable to a greater desire from consumers to outsource these tasks rather than self-perform.

Interior/Exterior Painting

FirstService estimates the U.S. interior/exterior painting services market at $50 billion. The market is highly fragmented, with the largest company (Certa Pro Painters at $700 million in annual revenue) representing about 1.5% market share. The company often highlights the primary growth driver within the residential painting business to be rising home values, which fuels home improvement spending as homeowners seek to maintain and reinvest in their most valuable asset. However, management has also highlighted demographic trends such as aging in place and an increasing reliance on professional contractors as important factors for driving growth across the company's home improvement brands.

Along this same vein, Sherwin-Williams, which sells paint and coatings through standalone stores and retail channels, has said that it "continually sees that more people are having painting services done for them." In exhibit 12, the company's industry data shows that the architectural pro (i.e., painting contractor) continues to become a larger part of the overall market relative to the DIY consumer. In 2022, the painting contractor represented 64% of total U.S. paint sales, up from 41% in 1980.

Exhibit 12
The "DIFM" Preference and Growing Reliance on the Pro
Pro vs. DIY Mix of Painting Service Market



Sources: Sherwin-Williams and William Blair Equity Research

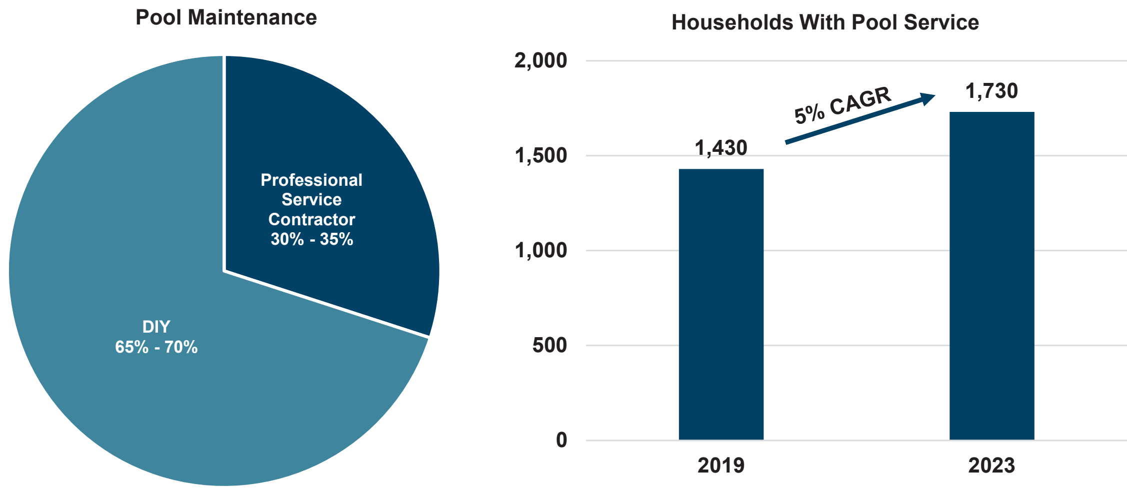
This steady upward trajectory in usage of painting contractors reversed during the Great Recession, but this trend quickly reverted toward DIFM over the subsequent decade. This same dynamic occurred during the COVID pandemic as consumers nesting at home took on more DIY projects. But again, usage of pro contractors ramped up in 2021 and 2022. According to management, this trend continued in 2023. This trend was also confirmed by FirstService, which saw consumers take a sharp turn back toward usage of professional contractors in 2021.

Sherwin-Williams's Consumer Brands Group is the company's primary DIY channel (15% of total sales), targeting consumers through large retailers such as Lowe's and Menards. Even within this DIY-focused segment, the fastest growing part of the business is the "Pro Who Paints." These are general contractors and handymen who provide painting services as part of a larger job (e.g., remodeling, flooring, plumbing, electric). The company continues to invest in the Pro Who Paints sector, identifying it as a primary initiative and adding hundreds of dedicated sales representatives over the last several years with plans to invest further in 2024 and 2025. The Pro Who Paints is the primary growth driver within the Consumer Brands Group, increasing at a double-digit rate over the last three years. In other words, even within Sherwin-Williams's DIY segment, the fastest growing market receiving the most investment is being fueled by DIFM tailwinds.

Pool Services

According to Pool Corporation, the number of households using a professional pool service increased 21% between 2019 and 2023 (5% CAGR). This compares to low-single-digit growth in the installed pool base, suggesting a market shift away from DIY pool maintenance in favor of professional pool services. This market is benefiting from the same demographic drivers causing a shift from DIY and toward DIFM in other home services categories. With roughly 65% to 70% of pool maintenance being done by the pool owner and a historical pattern of steady pool installations, there is a sizable market opportunity for professional pool service firms in this highly fragmented space.

Exhibit 13
The "DIFM" Preference and Growing Reliance on the Pro
U.S. Pool Service Trends

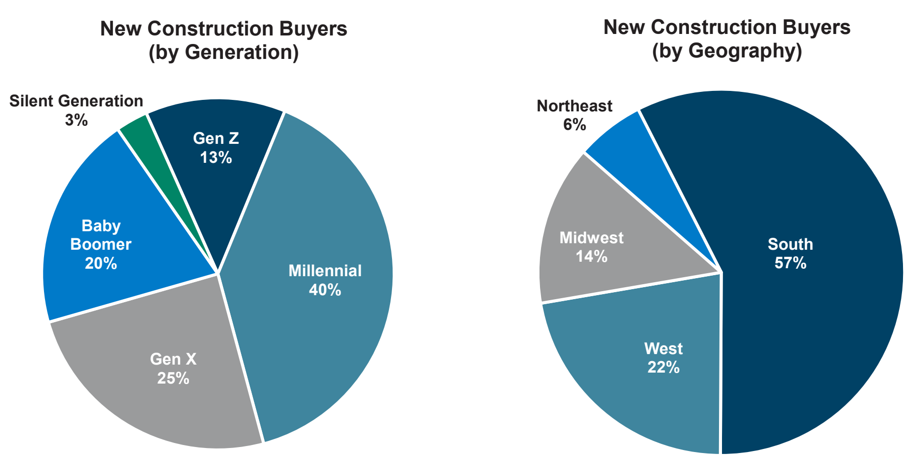


Note: Household figures are in thousands

Sources: Pool Corporation and William Blair Equity Research

The leading catalyst for new pool service customers is, unsurprisingly, new pool construction, which is correlated with new home construction. According to home data from Zillow, millennials and Gen Z, who have a stronger preference for professional services, now account for more than half of all new home construction buyers. On average, new home construction buyers tend to have higher incomes than existing homeowners, with the ability to outsource more services. Importantly, 75% of new home construction is occurring in the South and West, fully encompassing the Sun Belt region, which has about three times the number of pools per capita as the northern United States. Altogether, Texas, Florida, California, and Georgia, which are some of the largest markets for pool services, account for 43% of new home construction.

Exhibit 14
The "DIFM" Preference and Growing Reliance on the Pro
New Home Construction Buyers



Sources: Zillow "2023 Consumer Housing Trends Report" and William Blair Equity Research

The maintenance and repair market for existing pools is also an attractive and higher margin opportunity for pool service providers. According to Leslie's, the average pool age in the United States is over 23 years old. This is past the point of resurfacing for concrete pools (typically every 10 to 15 years) and within the refinishing age of many fiberglass shell types (typically 20 to 30 years). It is also well within the replacement period for many parts such as pumps, heaters, filters, chlorinators, valves, and automation systems. Pool service companies can benefit from not only the natural lifecycle of pool parts, but also upgrade opportunities to more sophisticated pool equipment. Many pool equipment categories, such as automation systems, variable speed pumps, salt chlorinators, and robotic pool cleaners are underpenetrated with existing installed pools, relative to new installations. While some pool equipment like salt chlorinators and robotic pool cleaners may impact chemical and cleaning volumes for some customers, they do not remove the value of regular maintenance by pool service companies and can be a source for higher-ticket repair work.

Exhibit 15
The "DIFM" Preference and Growing Reliance on the Pro
Penetration Rates for Pool Equipment

Equipment	Aftermarket	New Builds
Automation Systems	~30%	~55%
Variable Speed Pumps	~40%	~80%
Salt Chlorinators	~15%	~55%
Robotic Pool Cleaners	~15%	~35%

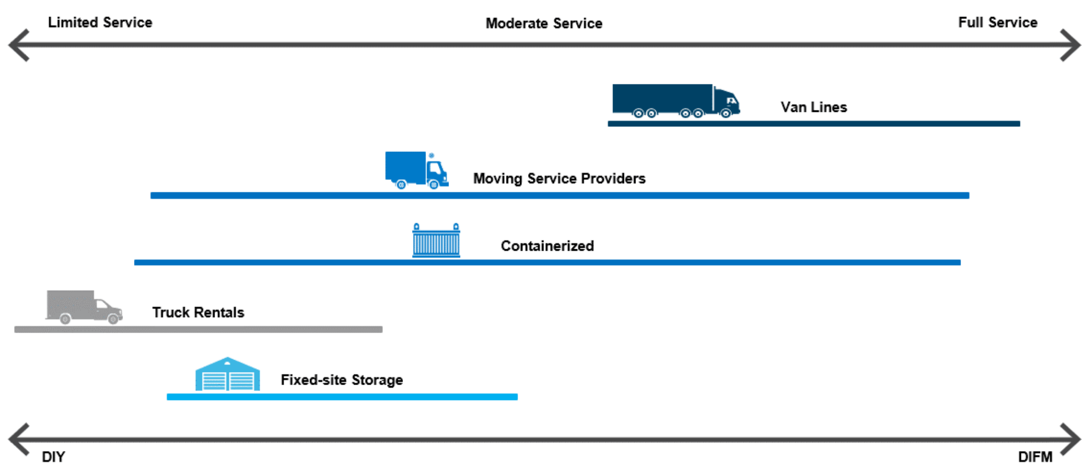
Source: Leslie's Inc.

In addition, the difference in service quality between DIY and DIFM is increasing as the industry becomes more professionalized. In a market typically serviced by one- to five-person operators known as "one polers," scaled players can provide consistent service levels, chemistry quality, maintenance and repair availability, and booking and billing infrastructure that small operators are unable to offer. The increase in sophistication appeals to consumers who favor DIFM options as long as the level of quality reaches an appropriate tier above a DIY solution.

Moving and Storage

We believe the moving and storage market can be characterized as having a moderate to high degree of DIY compatibility given the limited need for technical skill or know-how as compared to many other home-based services (e.g., HVAC repair, roofing, restoration). Nevertheless, many DIY-oriented consumers are still likely to rent or lease a moving truck or storage unit to support their moving and storage needs. Alternatively, a more DIFM-oriented customer will be more inclined to outsource some or all elements of the moving/storage process to a third party (e.g., packing, transportation, storage, unloading). This variation in product and service need by consumer creates a market for moving and storage services that is best viewed in the context of a DIY/DIFM spectrum.

Exhibit 16
The "DIFM" Preference and Growing Reliance on the Pro
Moving and Storage DIY/DIFM Spectrum of Services



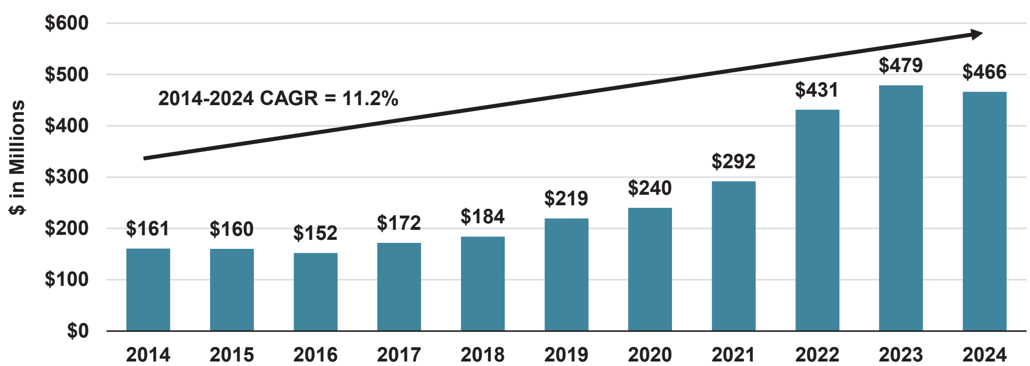
Sources: Third-Party Market Study and William Blair Equity Research

As the largest self-proclaimed "do-it-yourself" moving and storage operator in North America, U-Haul heavily caters to the DIY consumer who is likely to self-perform as many tasks as possible during the moving and storage process. During fiscal 2024, about 80% of U-Haul's revenue came from either the rental of self-moving equipment (i.e., box trucks) or the leasing of self-storage units.

In addition to renting and leasing moving and storage equipment, U-Haul offers several other products and services designed to simplify the moving and storage experience for customers. Moving Help is an online marketplace that connects U-Haul customers to localized, third-party service providers that can offer moving support services (e.g., loading and unloading). U-Box is U-Haul's branded portable storage and moving solution designed to allow for increased convenience and flexibility and, if desired, an outsourcing of the transportation portion of the moving and storage process to U-Haul and/or an independent third party.

While U-Haul does not explicitly report revenue from its Moving Help and U-Box service offering, these two revenue streams make up the majority of the company's "Other Revenue" line, which has grown at an annualized rate of 11.2% since 2014. This compares to a 2014-2024 CAGR of 7.3% for the company's core self-moving and storage product and service offering.

Exhibit 17
The "DIFM" Preference and Growing Reliance on the Pro
U-Haul Moving Help and U-Box Annual Revenue



Notes:
1) U-Haul's "Other Revenue" consists of numerous services or rentals, of which U-Box contracts and service fees from Moving Help are the main components
2) $ in millions
Sources: Company reports and William Blair Equity Research

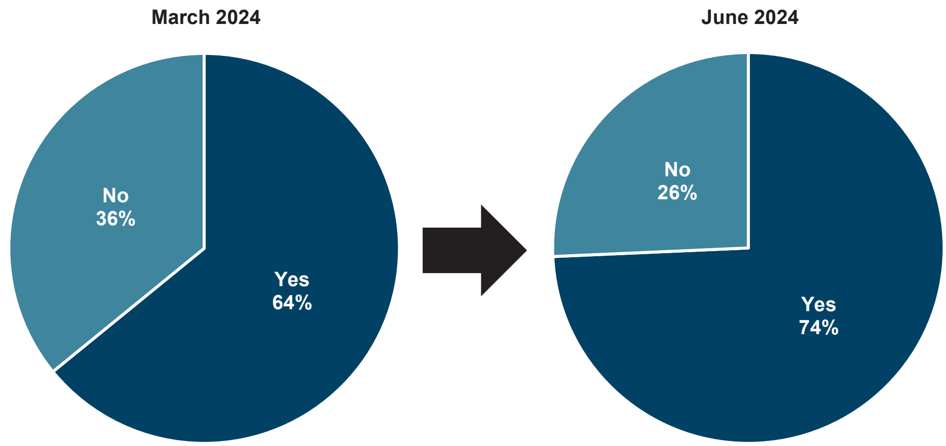
While Moving Help and U-Box represent a small portion of U-Haul's consolidated revenue, low-double-digit growth in these businesses (versus low-single-digit industry growth overall) points to a consumer who is increasingly willing to outsource moving and storage-related activities versus self-perform.

Home Improvement, Renovations, and Design

The home improvement market is estimated to generate annual revenues of roughly $1.0 trillion in North America, with roughly a 50/50 split between DIY and DIFM. The industry has been volatile in recent years against higher interest rates and sustained declines in existing home sales, which have been exacerbated by consumer demand being pulled forward during the pandemic. However, industry growth should move back into positive territory as the housing market normalizes. We expect long-term annual growth in the midsingle-digit range on the back of several structural, housing-related tailwinds.

Within the home renovations space, including projects like kitchen and bath remodels, interior/exterior repairs, etc., DIFM maintains a more significant share at roughly 80%, albeit slightly below its peak at 83% in 2019. Before the pandemic, the DIFM segment increased share at a 35-basis-point annual clip over the prior two decades, where total expenditures adjusted for inflation increased at 3% compound annual rate, or roughly 4 times the annual growth in DIY. While the pandemic drove the initial surge in DIY when consumers were flush with free time at home, the recovery in DIFM has been delayed in recent years as the soft housing market and uncertain macro backdrop has shifted the consumers away from major renovation projects toward more minor refreshes, which have a higher penetration in DIY. However, we expect DIFM mix to return to 2019 levels as the housing market normalizes, where demographic shifts highlighted above along with increased investments by retailers to support professionals should drive longer-term outsized growth within the DIFM segment. We have already started to see some green shoots around a DIFM acceleration in our recent survey of over 600 individuals where 74% of respondents planned to use a professional during an upcoming home improvement project, up 10% from our survey in February 2024. Planned utilization of a professional was highest among millennials and Gen X respondents, which is in line with our thesis around shifting demographics and the expected tailwind for the DIFM market.

Exhibit 18
The "DIFM" Preference and Growing Reliance on the Pro
"Do you plan to use a professional contractor to complete your home improvement project?"

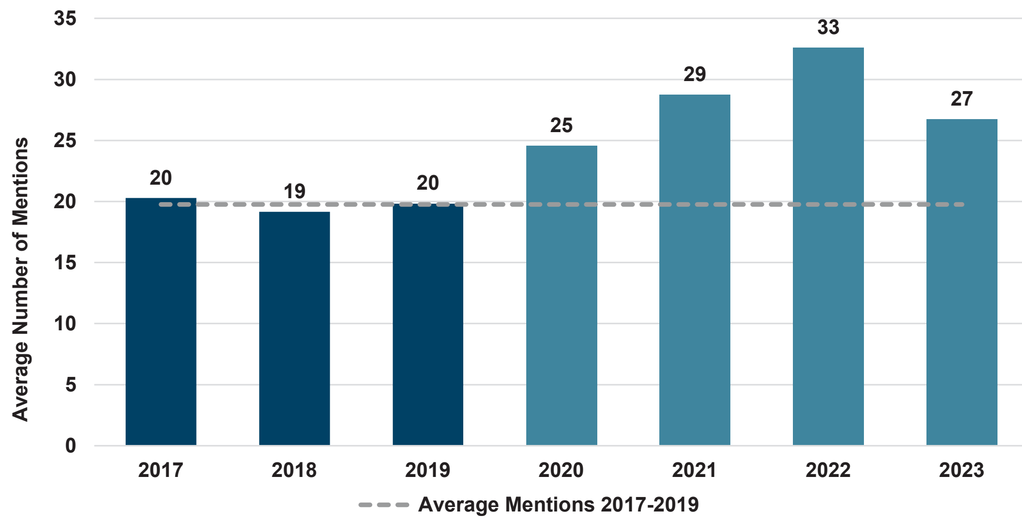


n = 614

Sources: Survey Monkey and William Blair Equity Research

Home improvement retailers like Home Depot, Lowe's, and Floor & Decor have increasingly prioritized the professional customer in recent years, despite the temporary DIY renaissance, given the more significant, untapped growth potential as DIFM adoption rises and the long-term benefits of a stickier, recurring revenue stream. Lowe's expects its pro sales to grow 2 times the market rate and Ted Decker, CEO of Home Depot, recently stated, "Pro is our biggest growth opportunity, and to provide the products and capabilities pros need, we are evolving our organization and approach to better serve them." The increasing importance of pros is evident in the number of mentions of the DIFM market on earnings calls—the combined average per call across Home Depot, Lowe's, and Floor & Decor has been some 40% higher over the past four years compared to pre-pandemic levels.

Exhibit 19
The "DIFM" Preference and Growing Reliance on the Pro
Average Number of Mentions of Professional Services per Earnings Call
Home Improvement Retailers—Floor & Decor, Home Depot, and Lowe's

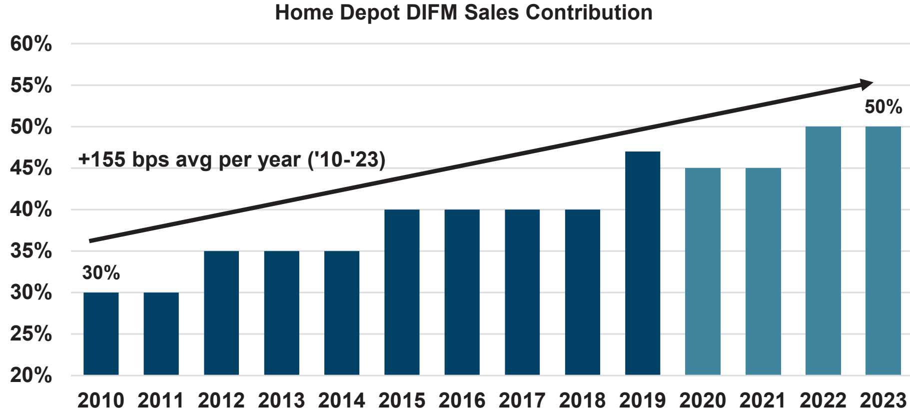


Note: Mention of "Pro," "DIFM," "commercial," or "professional," includes opening remarks, Jan. 1 to Dec. 31 of each year

Sources: Company reports; FactSet; and William Blair Equity Research

While the recovery of the DIFM market has been slower across the broader industry over the past two years, Home Depot's DIFM-focused initiatives drove the pro sales mix to all-time highs of 50% in 2023, exceeding pre-pandemic levels, before which it had increased by an average of 155 basis points per year from a 30% mix in 2010.

Exhibit 20
The "DIFM" Preference and Growing Reliance on the Pro
Home Depot DIFM Sales Contribution

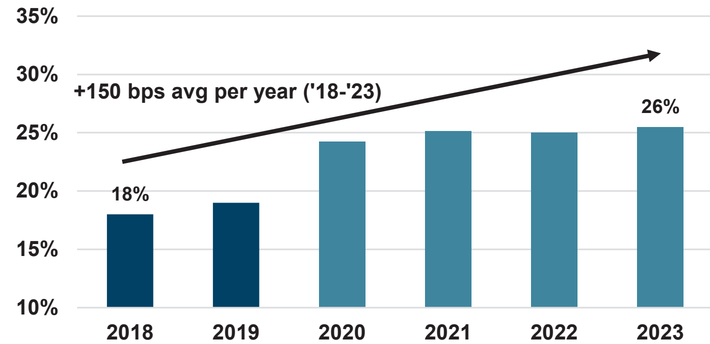


Sources: Company reports and William Blair Equity Research

Lowe's DIFM sales mix reached nearly 26% in 2023, representing a 750-basis-point increase from 18% in 2018. Lowe's professional business did not decline in 2020 and 2021 like it did for its peers, as the company benefited from the launch of several pro-focused initiatives (see details below).

However, the company's DIFM expansion has stalled in recent years, likely because of some fall-off following the significant gains during the pandemic era, as well as the broader consumer shift toward smaller ticket projects.

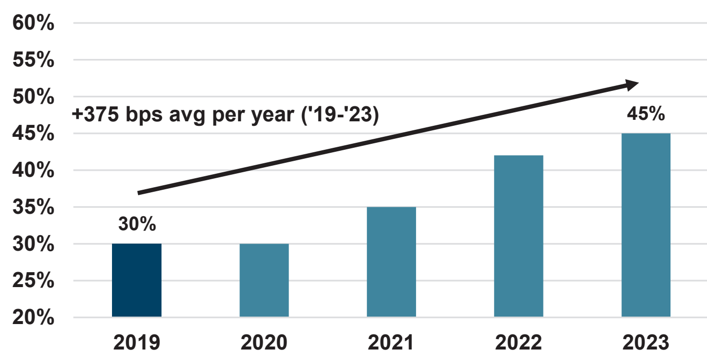
Exhibit 21
The "DIFM" Preference and Growing Reliance on the Pro
Lowe's DIFM Sales Contribution



Sources: Company reports and William Blair Equity Research

Floor & Decor has seen similar momentum, albeit during a shorter time frame, as pro tendered sales represented 45% of revenue in 2023, up 1,500 basis points from 30% in 2019.

Exhibit 22
The "DIFM" Preference and Growing Reliance on the Pro
Floor & Decor DIFM Sales Contribution



Sources: Company reports and William Blair Equity Research

Generally, home improvement retailers target independent pros working on smaller residential projects who historically sourced materials and tools from local, mom-and-pop retailers, which, in turn, provided some form of an incentive. However, the value of that return has eroded over the years as home improvement centers launched additional benefits targeting pros and offered scale, product breadth, and elevated services that became increasingly important as demand for DIFM continues to rise.

The pro loyalty programs offered by home improvement centers are a key differentiator in pro migration from local independent retailers. In Lowe's 2022 State of the Pro report, some 76% of pros indicated an increased reliance on retailers and 88% of pros indicated that it was important for their retail partners to have valuable loyalty programs with offerings beyond cashback rewards. The loyalty programs typically drive high adoption and engagement among pros shopping at the home improvement retailers. Floor & Decor has indicated that some 80% of its pro sales are from enrolled members, which spend 3 times that of nonmembers, and Lowe's has indicated that loyalty members spend about 4 times more than non-enrolled pros. Other important drivers included in-stock products, tools and preferred brands, up-to-date inventory information, and knowledgeable employees. We believe the larger, scaled home improvement retailers are better positioned to appeal to the evolving pro needs, particularly around a comprehensive loyalty program, inventory positioning, and digital capabilities, although trained employees are likely a more common pitfall compared to the local independents.

Over the past five years, home improvement retailers have ramped up benefits and offerings to pros as these businesses continue to prioritize customer acquisition in this high-value segment. Key initiatives include:

- ***Floor & Decor launched a private-label, pro-dedicated credit card in June 2020,*** which offered more favorable payment and interest terms compared to industry standards.

- ***Home Depot announced the $8 billion acquisition of HD Supply,*** a leading national distributor and provider of products and services targeting the pro segment, in November 2020.

- ***In 2020 and 2021, Lowe's launched several initiatives targeting the pro customer,*** including a new layout of its stores, expanding its professional-grade product assortment, and implementing a pro-focused CRM platform.

- ***Lowe's revamped its pro loyalty program and launched MVPs Pro Rewards and Partnership Program in February 2022,*** which introduced a tiered membership program with expanded benefits.

- ***In October 2022, Home Depot launched Path to Pro,*** an online marketplace to connect skilled tradespeople with hiring trades professionals. The offering also built on Home Depot's 2021 initiative, the Path to Pro Skills Program, which offered free training for those interested in pursuing a career in skilled trades.

- ***In January 2023, Home Depot overhauled the Pro Xtra loyalty program*** with the addition of three membership tiers, an expanded offering of benefits, exclusive sales and in-store events, and a suite of business management tools.

- ***Home Depot announced organizational changes to advance its pro initiatives in October 2023*** by combining its outside sales and services business with store operations to provide a more holistic offering to a wider range of pros.

- ***Floor & Decor hosted over 120 educational classes for pros in 2023, up from 71 in 2022,*** as the need for continuing education continues to rise along with the increase in end-consumer demand for new, innovative products.

- ***In March 2024, Home Depot announced the $18.25 billion acquisition of SRS Distribution,*** a leading residential specialty distributor serving professional roofers, pool contractors, and landscapers. The acquisition enhanced Home Depot's ability to support pros completing more complex projects across multiple verticals where it held very little market share. Home Depot estimates that the acquisition of SRS expands its TAM by $50 billion, underscoring the company's ongoing efforts to build a more meaningful presence in the DIFM space.

The extra costs incurred to attract and service pros are extensive and have likely been a margin headwind over the past several years as retailers invest more heavily into acquisition efforts. However, the home improvement retail segment is clearly positioning itself for an acceleration in DIFM adoption over the long term where the incremental growth and resulting increase in productivity should help leverage margins. The elevated pro offerings not only open home improvement retailers to a new and growing customer segment, but also improve visibility into their top line, since pros typically shop at a higher frequency across a broader assortment with larger average ticket values compared to DIY customers. For example, pros represent roughly 10% of Home Depot's customer base, while generating 50% of sales, and Floor & Decor's pro customer generates an average order value 2 to 3 times that of its DIY counterpart. Furthermore, the loyalty programs provide additional data on pros' shopping behavior, which should enable home improvement retailers to be more efficient in inventory planning, store payroll, and marketing longer term.

Home improvement retailers are not the only ones in the home renovations space expecting an increase in DIFM adoption. Many furniture retailers are also bolstering efforts to attract members of the design trade and offering more extensive in-house interior design services. While historically thought of as a luxury only available to the ultra-wealthy, interior design services have become more widely available through digital offerings, like Havenly; AI-enabled services, such as Wayfair's July 2023 launch of Decorify; and retailers competing on a more direct basis, including IKEA's April 2023 launch offering of one-on-one appointments priced at $99 per room, well below the $100 to $200 average hourly rate charged by interior designers. According to the recent survey from Houzz & Home, some 24% of renovating homeowners sought design-related professionals to support their projects in 2023, slightly down from the peak in 2022 at 26%, but above 2019 levels of 20%, underscoring the growing reliance on specialized expertise. Given the broader adoption of design services across a wider segment of consumers, furniture retailers are quickly ramping up efforts to appeal to this trade where the generally fragmented market provides a lot of room for accelerated sales growth and market share gains.

During its most recent earnings call, Arhaus's CFO, Dawn Phillipson, mentioned that "the trade business is outpacing the average growth of our business total. So we see a big, big future in that. We think we've only started that. We think we've got a huge runway ahead of us." The company indicated plans to further invest in initiatives appealing to members of the design trade; ramp up its internal design services offering, where related order values are typically 4 times the company average; and continue to open smaller-format, services-focused design studio locations, of which the company currently operates 8 locations with the potential to expand to over 100 longer term.

Williams-Sonoma also recently highlighted the increasing importance of the trade, for which related sales were up 6% during the first quarter compared to a 5% decline across the broader company, and CEO Laura Jean Alber indicated that "B2B is really a very important strategic initiative for us and a huge part of our growth in the future because it's such a fractured market and nobody has much share, and yet it's quite big."

While not a furniture retailer, Floor & Decor has also made several efforts to expand its presence in the interior design space. Most notably, the company maintains roughly five in-house designers per warehouse who offer consumers complementary design and room planning services, which not only relieves the burden and saves time for the company's pro customer, but also drives an average ticket some 2 to 3 times higher than the company average and improves customer service scores. Floor & Decor is also continuing to test its smaller format design studio concept with five locations that are central to urban design districts and which target the interior design community.

Automotive Services

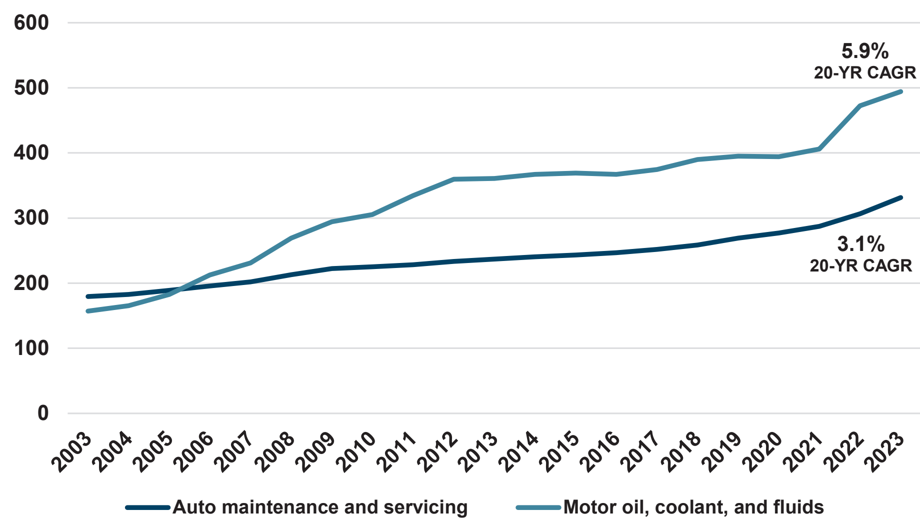
The automotive aftermarket care industry in the United States drove roughly $390 billion in sales in 2023. Going forward, we expect annual growth to remain stable and in line with its historical average in the midsingle-digit range despite the volatile macro backdrop given the inherently defensive nature of the needs-based offering and several secular tailwinds including a growing car parc; acceleration in miles driven; aging vehicle population; and increasing complexity of vehicles, parts, and services. While we expect industry growth to remain resilient, we believe 2024 could land toward the lower end of its historical range as pressured consumers are electing to defer some higher-ticket maintenance costs, such as tires, leading to less pricing power, particularly against high levels of inflation in recent years.

We estimate the DIFM segment contributes just over 75% of the auto aftermarket care industry. DIFM has steadily taken share over the past decade as the segment has contributed roughly 90% of the industry's volume growth. We expect the shift to DIFM to continue over the long term, despite some near-term pressures of deferred maintenance and additional services costs on an inflation-conscious consumer. Along with the demographic tailwinds explored on pages 5-9, the ongoing adoption of DIFM in the automotive services market is driven by three main tailwinds detailed below.

Value and convenience

In our view, the top driver behind the shift to DIFM is the increased value and convenience of the offering. The cost savings associated with DIY maintenance has eroded over the past 20 years as the price of motor oil, coolant, and fluids has increased at nearly a 6% compound annual rate, roughly double the 3% CAGR across the price of auto maintenance and services. As the price gap closes, the value of a professional guarantee and additional conveniences, like Driven Brands' promise of a 10-minute oil change without the driver having to leave the car, have contributed to the ongoing adoption of DIFM.

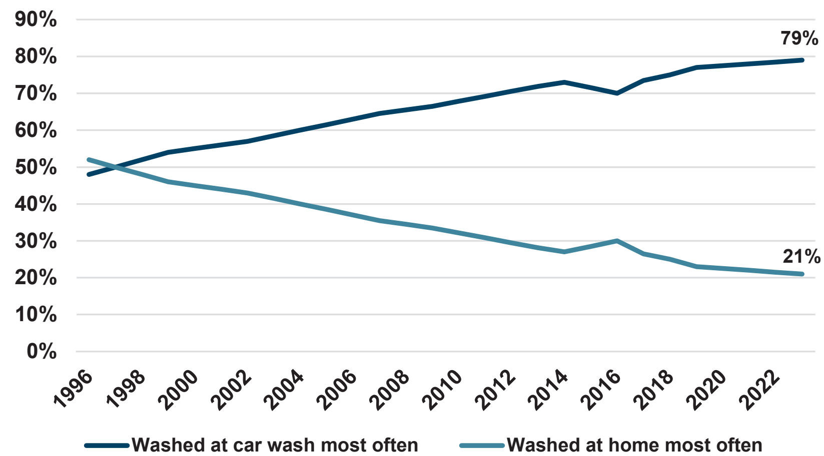
Exhibit 23
The "DIFM" Preference and Growing Reliance on the Pro
Consumer Price Index: Automotive Services vs. DIY Products



Sources: U.S. Census Bureau and William Blair Equity Research

The value of time and convenience is clearly apparent within the car wash space. The percent of individuals who go to a car wash compared to washing their car at home has shifted over 30 percentage points to nearly 80% in just over 25 years. Our estimates do not take into consideration the ongoing shift within the car wash space from a self-service model (roughly 25% of the market) toward DIFM offerings, including in-bay automatic styles popular at gas stations and conveyor-based systems, which we expect will continue to gain share as self-service models remain in a net closure position. We estimate that it takes between 5 and 10 minutes to go to a car wash compared to 30 to 60 minutes to wash a car at home. As time-constrained consumers increasingly prioritize speed as well as value, we believe the DIFM market is uniquely advantageous, particularly as membership models increase in popularity. For example, Mister Car Wash offers unlimited washes, with options such as interior cleaning and dedicated membership lanes, for as little as $20 per month, compared to the $10 cost of a single wash, which has only further bolstered the appeal of DIFM as scaled players densify existing markets.

Exhibit 24
The "DIFM" Preference and Growing Reliance on the Pro
Car Wash at Home vs. Third-Party Provider

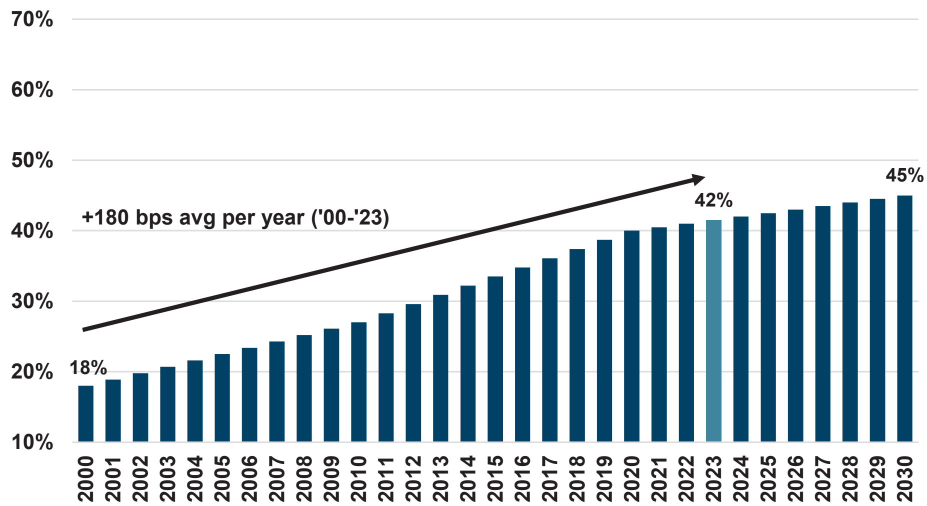


Sources: *Car Wash Magazine* and William Blair Equity Research

Increasing complexity of vehicles and related parts and services

Vehicles have become more complex and technologically sophisticated throughout the years, which has made DIY projects increasingly difficult. Vehicles have become more like rolling computers over the years as mechanical operations have largely been replaced by electronic control units (ECUs), which now play an essential role in the vehicle's performance, ranging from the engine and transmission to climate control and headlights. To no surprise, electronics make up over 40% of a new vehicle's manufacturing cost, a significant increase from just 18% in 2000. As a result, DIY repairs and maintenance not only require a mechanical skillset, but also expensive, specialized diagnostic equipment and programming knowledge. Furthermore, given the technologically connected nature of newer vehicles, a mistake during a DIY repair can quickly impact other functions where incremental repair costs defeat any intentional cost savings efforts from attempting DIY initially. The increasing complexity is not only accelerating DIFM adoption in the industry, but also driving higher, more profitable tickets on rising costs and the growing premiumization of certain products (motor oils, cash wash offerings, fuel, etc.). We recently hosted Driven Brands at our annual Growth Stock Conference (see our recap for more details) where management highlighted that the increasing complexity of vehicles drove the average collision check from roughly $1,700 to $4,000-plus over the past decade, reflecting an 8% CAGR.

Exhibit 25
The "DIFM" Preference and Growing Reliance on the Pro
Electronics as a Percentage of a New Car's Total Cost



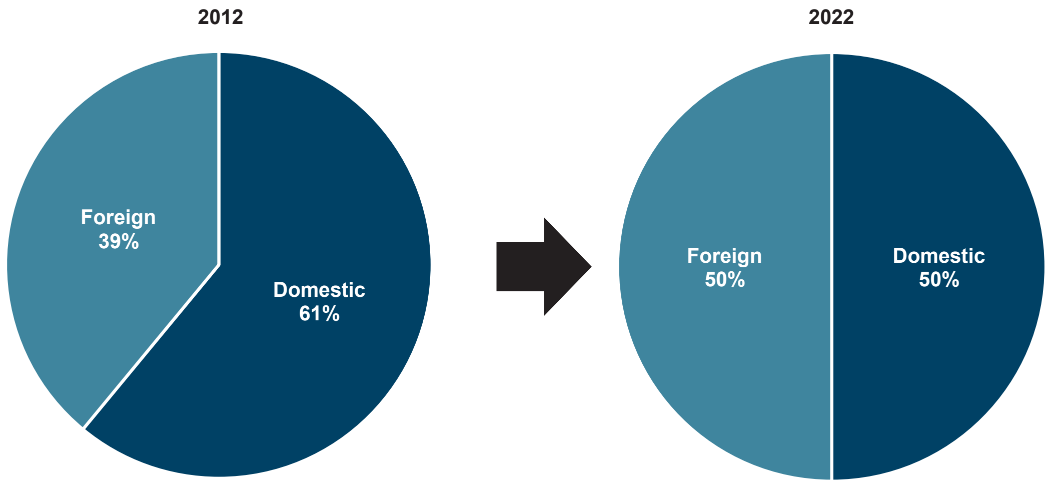
Sources: Deloitte and William Blair Equity Research

That being said, DIY will likely continue to play a role in the space. There have long been speculations around the death of DIY following auto advancements, including a quote from *U.S. News and World Report* from 1968 stating, "No more do-it-yourself ... current models ... defy even the most dedicated do-it-yourself mechanics. Professional service has become a necessity." There are auto aftermarket brands releasing innovative products, like Holley's Sniper 2.0 EFI, that provide a more user-friendly interface for a smoother installation for the average auto enthusiast. However, we still expect the increasing complexity of vehicles to drive accelerated growth in DIFM given the outsized impact on the average DIY consumer and broader demographic tailwinds.

Increasing share of foreign vehicles

Foreign vehicles increased as a percent of the U.S. car parc by 11 points over the past 10 years. We expect this trend to continue, which should provide a tailwind for the DIFM market as foreign vehicles typically require specialized tools and a skillset that is less commonly passed down through generations of auto enthusiasts. This is most impactful as foreign vehicles make up a larger part of the light truck segment, which is more likely to lean toward DIY maintenance and repairs.

Exhibit 26
The "DIFM" Preference and Growing Reliance on the Pro
Domestic vs. Foreign Vehicles in Operation Mix

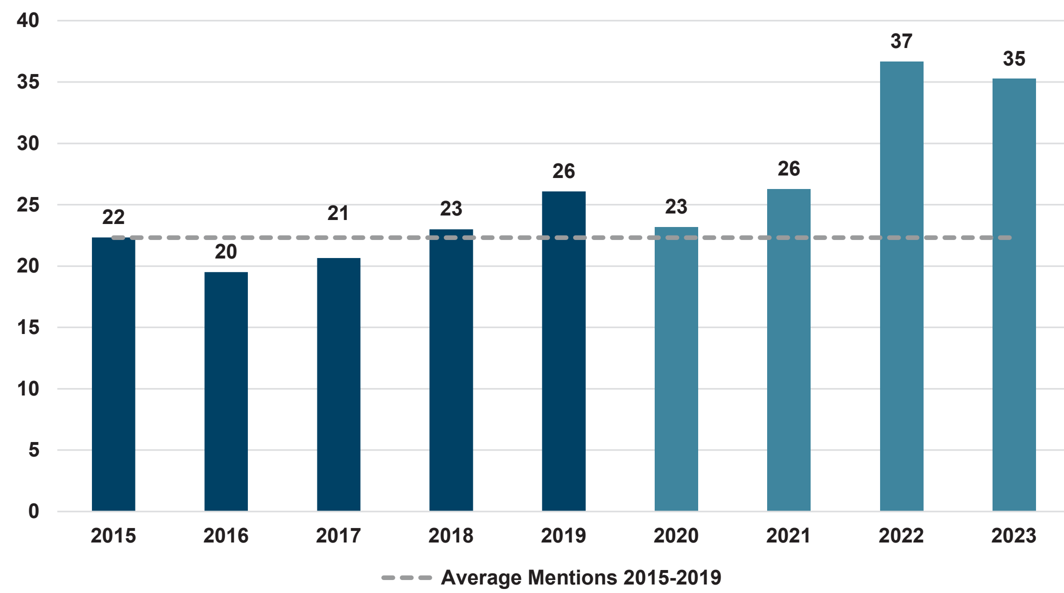


Sources: Lang Marketing and William Blair Equity Research

Overall, these trends have driven a decisive shift in consumer preferences toward DIFM automotive service providers. Similar to the broader DIFM market, the professional auto services space remains heavily fragmented where roughly 80% of the industry is dominated by small, independent mom-and-pops. However, we expect scaled players are well positioned to accelerate market share gains over the next decade as more sophisticated expertise, training, and equipment is needed to accommodate technological advancements and as consumers demand elevated service levels, particularly on the digital front. We believe scaled players can outcompete smaller peers on a more compelling value proposition, not only on lower priced goods, but also through subscription offerings and the ease and convenience of multiple locations. Out of our coverage, we believe Mister Car Wash is best positioned to benefit from the DIFM shift, as well as Driven Brands through its maintenance, collision, and paint segments, although we maintain concerns around the ongoing volatility within its glass and car wash businesses.

While the auto aftermarket parts retailers, such as O'Reilly, AutoZone, and Advance Auto, have historically focused on the DIY segment, the companies have increasingly prioritized growth in DIFM given the ongoing consumer shift and the considerable market share opportunity. Throughout 2022 and 2023, each of the major auto aftermarket retailers rolled out a professional pricing initiative to increase the competitiveness of the DIFM offering, despite the negative impact to gross margin given the expected long-term tailwinds in building stickier partnerships in the high-growth-potential DIFM segment. The heightened importance of the pro is clearly visible by the increase in mentions of the DIFM market during earnings, for which the combined average per call across O'Reilly, AutoZone, and Advance has been some 60% higher over the past two years compared to the historical average.

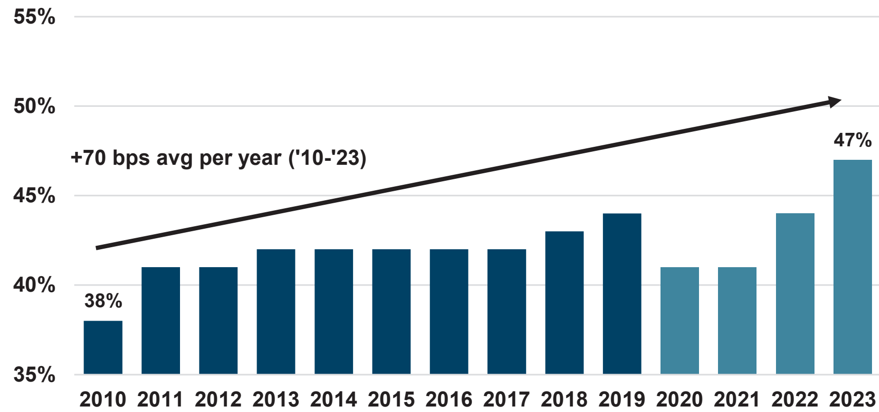
Exhibit 27
The "DIFM" Preference and Growing Reliance on the Pro
Average Number of Mentions of Professional Services per Earnings Call
Aftermarket Auto Parts Retailers—O'Reilly, AutoZone, and Advance Auto Parts



Note: Mention of "Pro," "DIFM," "commercial," or "professional," includes opening remarks, Jan. 1 to Dec. 31 of each year
Sources: Company reports; FactSet; and William Blair Equity Research

O'Reilly's DIFM sales mix reached all-time highs in 2023 at 47%, exceeding 2019 levels and reflecting a significant recovery after falling to some 41% in 2020 and 2021 amid a resurgence in DIY during the pandemic. O'Reilly's DIFM sales mix has increased at a 70-basis-point annual clip since 2010, a trend that we expect to continue over the long term, with potential for a near-term acceleration after a strong start in 2024 where the DIFM mix in the first quarter increased by 115 basis points to over 48%.

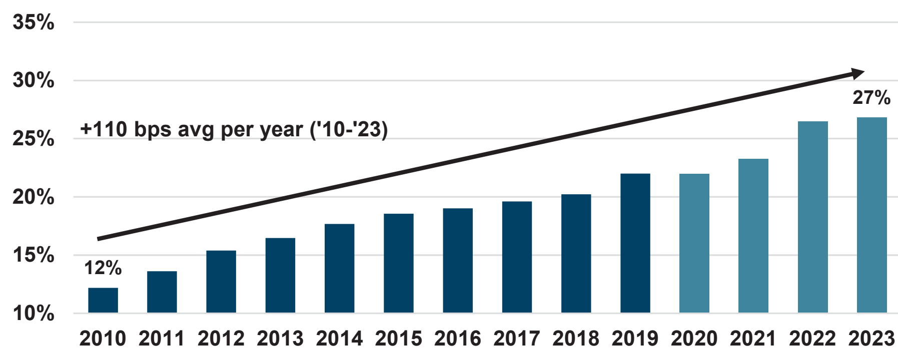
Exhibit 28
The "DIFM" Preference and Growing Reliance on the Pro
O'Reilly Automotive DIFM Sales Contribution



Sources: Company reports and William Blair Equity Research

AutoZone's DIFM sales mix also reached an all-time high in 2023 at 27%, well above 2019 levels of 22%, with steady expansion averaging over 110 basis points per year since 2010. However, AutoZone's 2023 DIFM growth of nearly 9% fell short of its long-term target of sustainable double-digit growth in the segment as the company continues to enhance its supply chain network to improve product availability.

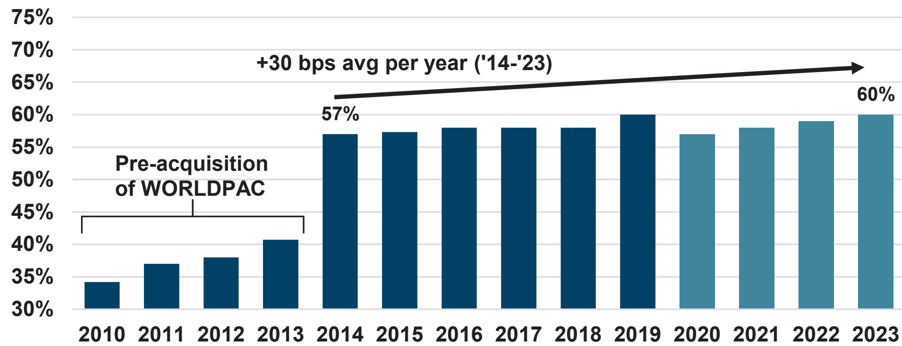
Exhibit 29
The "DIFM" Preference and Growing Reliance on the Pro
AutoZone DIFM Sales Contribution



Sources: Company reports and William Blair Equity Research

Advance Auto maintains the highest DIFM sales mix at 60% in 2023, which is in line with 2019 levels after a slight dip. Advance acquired WORLDPAC, a wholesale distributor that exclusively serves the professional consumer, in early 2014, which drove a significant increase in its DIFM mix; however, the company is currently in the market to sell the business to focus on improving the productivity of its core model.

Exhibit 30
The "DIFM" Preference and Growing Reliance on the Pro
Advance Auto Parts DIFM Sales Contribution



Sources: Company reports and William Blair Equity Research

O'Reilly, AutoZone, and Advance Auto all maintain a small market share of the professional market, ranging from the low to midsingle digits, representing a significant white-space opportunity. This is particularly true as the companies' scale along with the recently enhanced price position expand their competitive edge compared to smaller mom-and-pops, since product availability and speed are paramount for pros. It is difficult to attribute the retailers' increasing prioritization of professional services to either the ongoing consumer shift to DIFM or the market share opportunity against a fragmented competitive backdrop. However, we believe both can be relatively equal drivers here where the group of retailers have clearly forecast strong returns on their DIFM-related investments in price and distribution infrastructure, despite the pro channel running at a 300- to 500-basis-point gross margin deficit compared to its DIY counterpart.

The prices of the common stock of public companies mentioned in this report follow:

Advance Auto Parts, Inc. (Market Perform)	$57.91
Angi Inc Class A	$2.01
Arhaus, Inc. (Outperform)	$14.68
AutoZone, Inc. (Outperform)	$2,817.06
Driven Brands Holdings, Inc. (Market Perform)	$12.72
FirstService Corporation (Outperform)	$153.07
Floor & Decor Holdings, Inc. (Outperform)	$89.87
Holley, Inc. (Outperform)	$3.37
Home Depot, Inc.	$337.09
Leslie's, Inc. (Market Perform)	$3.25
Lowe's Companies, Inc.	$216.33
Mister Car Wash, Inc. (Outperform)	$6.50
O'Reilly Automotive, Inc. (Outperform)	$1,015.62
Pool Corporation (Outperform)	$296.17
Rentokil Initial	£4.66
Rollins Inc. (Outperform)	$49.74
Scotts Miracle-Gro Class A (Outperform)	$61.06
Sherwin-Williams Company	$298.91
Toro Company	$3.79
U-Haul Holding Company	$59.88
Wayfair Inc. (Outperform)	$52.82
Williams-Sonoma, Inc.	$142.22
Yelp Inc.	$35.91
Zillow Group Class C	$47.94

IMPORTANT DISCLOSURES

This report is available in electronic form to registered users via R*Docs™ at https://williamblairlibrary.bluematrix.com or www.williamblair.com.

Please contact us at +1 800 621 0687 or consult https://www.williamblair.com/equity-research/coverage for all disclosures.

Tim Mulrooney attests that 1) all of the views expressed in this research report accurately reflect his/her personal views about any and all of the securities and companies covered by this report, and 2) no part of his/her compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed by him/her in this report. We seek to update our research as appropriate. Other than certain periodical industry reports, the majority of reports are published at irregular intervals as deemed appropriate by the research analyst.

DOW JONES: 39721.40
S&P 500: 5633.91
NASDAQ: 18429.30

Additional information is available upon request.

Current Rating Distribution (as of July 11, 2024):

Coverage Universe	**Percent**	**Inv. Banking Relationships ***	**Percent**
Outperform (Buy)	72	Outperform (Buy)	8
Market Perform (Hold)	28	Market Perform (Hold)	1
Underperform (Sell)	1	Underperform (Sell)	0

*Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

The compensation of the research analyst is based on a variety of factors, including performance of his or her stock recommendations; contributions to all of the firm's departments, including asset management, corporate finance, institutional sales, and retail brokerage; firm profitability; and competitive factors.

OTHER IMPORTANT DISCLOSURES

Stock ratings and valuation methodologies: William Blair & Company, L.L.C. uses a three-point system to rate stocks. Individual ratings reflect the expected performance of the stock relative to the broader market (generally the S&P 500, unless otherwise indicated) over the next 12 months. The assessment of expected performance is a function of near-, intermediate-, and long-term company fundamentals, industry outlook, confidence in earnings estimates, valuation (and our valuation methodology), and other factors. Outperform (O) - stock expected to outperform the broader market over the next 12 months; Market Perform (M) - stock expected to perform approximately in line with the broader market over the next 12 months; Underperform (U) - stock expected to underperform the broader market over the next 12 months; not rated (NR) - the stock is not currently rated. The valuation methodologies include (but are not limited to) price-to-earnings multiple (P/E), relative P/E (compared with the relevant market), P/E-to-growth-rate (PEG) ratio, market capitalization/revenue multiple, enterprise value/EBITDA ratio, discounted cash flow, and others. Stock ratings and valuation methodologies should not be used or relied upon as investment advice. Past performance is not necessarily a guide to future performance.

The ratings and valuation methodologies reflect the opinion of the individual analyst and are subject to change at any time.

Our salespeople, traders, and other professionals may provide oral or written market commentary, short-term trade ideas, or trading strategies-to our clients, prospective clients, and our trading desks-that are contrary to opinions expressed in this research report. Certain outstanding research reports may contain discussions or investment opinions relating to securities, financial instruments and/or issuers that are no longer current. Always refer to the most recent report on a company or issuer. Our asset management and trading desks may make investment decisions that are inconsistent with recommendations or views expressed in this report. We will from time to time have long or short positions in, act as principal in, and buy or sell the securities referred to in this report. Our research is disseminated primarily electronically, and in some instances in printed form. Research is simultaneously available to all clients. This research report is for our clients only. No part of this material may be copied or duplicated in any form by any means or redistributed without the prior written consent of William Blair & Company, L.L.C.

This is not in any sense an offer or solicitation for the purchase or sale of a security or financial instrument. The factual statements herein have been taken from sources we believe to be reliable, but such statements are made without any representation as to accuracy or completeness or otherwise, except with respect to any disclosures relative to William Blair or its research analysts. Opinions expressed are our own unless otherwise stated and are subject to change without notice. Prices shown are approximate. This report or any portion hereof may not be copied, reprinted, sold, or redistributed or disclosed by the recipient to any third party, by content scraping or extraction, automated processing, or any other form or means, without the prior written consent of William Blair. Any unauthorized use is prohibited.

If the recipient received this research report pursuant to terms of service for, or a contract with William Blair for, the provision of research services for a separate fee, and in connection with the delivery of such research services we may be deemed to be acting as an investment adviser, then such investment adviser status relates, if at all, only to the recipient with whom we have contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing). If such recipient uses these research services in connection with the sale or purchase of a security referred to herein, William Blair may act as principal for our own account or as riskless principal or agent for another party. William Blair is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

For important disclosures, please visit our website at williamblair.com.

This material is distributed in the United Kingdom and the European Economic Area (EEA) by William Blair International, Ltd., authorised and regulated by the Financial Conduct Authority (FCA). William Blair International, Limited is a limited liability company registered in England and Wales with company number 03619027. This material is only directed and issued to persons regarded as Professional investors or equivalent in their home jurisdiction, or persons falling within articles 19 (5), 38, 47, and 49 of the Financial Services and Markets Act of 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not "relevant persons."

William Blair & Company, L.L.C. licenses and applies the SASB Materiality Map® and SICSTM in our work.

William Blair

Equity Research Directory

John Kreger, Partner Director of Research +1 312 364 8612
Kyle Harris, CFA, Partner Operations Manager +1 312 364 8230

Scott Hansen Associate Director of Research +1 212 245 6526

CONSUMER

Sharon Zackfia, CFA, Partner +1 312 364 5386
Group Head–Consumer
Lifestyle and Leisure Brands, Restaurants, Automotive/E-commerce

Jon Andersen, CFA, Partner +1 312 364 8697
Consumer Products

Phillip Blee, CPA +1 312 801 7874
Home and Outdoor, Automotive Parts and Services, Discount and Convenience

Dylan Carden +1 312 801 7857
E-commerce, Specialty Retail

ECONOMICS

Richard de Chazal, CFA +44 20 7868 4489

ENERGY AND SUSTAINABILITY

Jed Dorsheimer +1 617 235 7555
Group Head–Energy and Sustainability
Generation, Efficiency, Storage

Tim Mulrooney, Partner +1 312 364 8123
Sustainability Services

FINANCIAL SERVICES AND TECHNOLOGY

Adam Klauber, CFA, Partner +1 312 364 8232
Group Head–Financial Services and Technology
Financial Analytic Service Providers, Insurance Brokers, Property & Casualty Insurance

Cristopher Kennedy, CFA +1 312 364 8596
Financial Technology, Specialty Finance

Jeff Schmitt +1 312 364 8106
Wealthtech, Wealth Management, Capital Markets Technology

GLOBAL SERVICES

Tim Mulrooney, Partner +1 312 364 8123
Group Head–Global Services
Commercial Services, Staffing

Andrew Nicholas, CPA +1 312 364 8689
Consulting, HR Technology, Information Services

Trevor Romeo, CFA +1 312 801 7854
Staffing

HEALTHCARE

Biotechnology

Tim Lugo, Partner +1 415 248 2870
Group Head–Biotechnology

Sami Corwin, Ph.D. +1 312 801 7783

Andy T. Hsieh, Ph.D., Partner +1 312 364 5051

Myles R. Minter, Ph.D. +1 617 235 7534

Matt Phipps, Ph.D., Partner +1 312 364 8602

Healthcare Technology and Services

Ryan S. Daniels, CFA, Partner +1 312 364 8418
Group Head–Healthcare Technology and Services
Healthcare Technology, Healthcare Services

Margaret Kaczor Andrew, CFA, Partner +1 312 364 8608
Medical Technology

Brandon Vazquez, CFA +1 212 237 2776
Dental, Animal Health

Life Sciences

Matt Larew, Partner +1 312 801 7795
Life Science Tools, Bioprocessing, Healthcare Delivery

Andrew F. Brackmann, CFA +1 312 364 8776
Diagnostics

Max Smock, CFA +1 312 364 8336
Pharmaceutical Outsourcing and Services

INDUSTRIALS

Brian Drab, CFA, Partner +1 312 364 8280
Co-Group Head–Industrials
Advanced Manufacturing, Industrial Technology

Ryan Merkel, CFA , Partner +1 312 364 8603
Co-Group Head–Industrials
Building Products, Specialty Distribution

Louie DiPalma, CFA +1 312 364 5437
Aerospace and Defense, Smart Cities

Ross Sparenblek +1 312 364 8361
Diversified Industrials, Robotics, and Automation

TECHNOLOGY, MEDIA, AND COMMUNICATIONS

Jason Ader, CFA, Partner +1 617 235 7519
Co-Group Head–Technology, Media, and Communications
Infrastructure Software

Arjun Bhatia, Partner +1 312 364 5696
Co-Group Head–Technology, Media, and Communications
Software as a Service

Dylan Becker, CFA +1 312 364 8938
Software, Software as a Service

Louie DiPalma, CFA +1 312 364 5437
Government Technology

Jonathan Ho, Partner +1 312 364 8276
Cybersecurity, Security Technology

Maggie Nolan, CPA, Partner +1 312 364 5090
IT Services

Jake Roberge +1 312 364 8056
Software, Software as a Service

Ralph Schackart III, CFA, Partner +1 312 364 8753
Internet and Digital Media

Stephen Sheldon, CFA, CPA, Partner +1 312 364 5167
Vertical Technology – Real Estate, Education, Restaurant/Hospitality

EDITORIAL AND SUPERVISORY ANALYSTS

Steve Goldsmith, Head Editor and SA +1 312 364 8540

Audrey Majors, Editor and SA +1 312 364 8992

Beth Pekol Porto, Editor and SA +1 312 364 8924

Lisa Zurcher, Editor and SA +44 20 7868 4549

Mubasil Chaudhry, Editor and SA +44 20 7868 4453