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Ongoing, if uneven, economic recovery and progress against the pandemic resulted in another strong quarter for global equity markets, with positive returns across nearly all sectors and regions.

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From tech antitrust to climate change, regulatory risk has moved to the fore. We remain focused on how regulatory change affects the competitive structure of each industry—for worse or for better.

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### Composite Performance

Total Return (%) — Periods Ending June 30, 2021<sup>1</sup>

	3 Months	YTD	1 Year	3 Years <sup>2</sup>	5 Years <sup>2</sup>	Since Inception <sup>2,3</sup>
HL World Equity (Gross of Fees)	11.12	14.28	44.02	21.06	20.49	16.05
HL World Equity (Net of Fees)	11.02	14.05	43.45	20.57	20.01	15.59
MSCI World Index <sup>4,5</sup>	7.89	13.33	39.67	15.57	15.43	11.68
MSCI All Country World Index <sup>5,6</sup>	7.53	12.56	39.87	15.13	15.19	11.19

<sup>1</sup>The Composite performance returns shown are preliminary; <sup>2</sup>Annualized Returns; <sup>3</sup>Inception Date: September 30, 2013; <sup>4</sup>The Benchmark Index; <sup>5</sup>Gross of withholding taxes; <sup>6</sup>Supplemental Index.

Please read the above performance in conjunction with the footnotes on the last page of this report. Past performance does not guarantee future results. All performance and data shown are in US dollar terms, unless otherwise noted.

### Portfolio Positioning (% Weight)

Sector	HL World	MSCI World	(Under) / Over
Health Care	21.8	12.6	9.2
Cash	3.6	—	3.6
Info Technology	24.6	22.1	2.5
Financials	14.9	13.6	1.3
Industrials	11.0	10.6	0.4
Comm Services	9.3	9.1	0.2
Energy	2.4	3.2	-0.8
Cons Discretionary	9.9	12.0	-2.1
Utilities	0.2	2.7	-2.5
Real Estate	0.0	2.7	-2.7
Materials	0.0	4.4	-4.4
Cons Staples	2.3	7.0	-4.7

Geography	HL World	MSCI World	(Under) / Over
Emerging Markets	5.2	—	5.2
Cash	3.6	—	3.6
Europe ex-EMU	10.2	9.1	1.1
Pacific ex-Japan	4.0	3.4	0.6
Frontier Markets <sup>7</sup>	0.0	—	0.0
Middle East	0.0	0.2	-0.2
Europe EMU	8.3	9.8	-1.5
Japan	4.6	6.8	-2.2
Canada	0.0	3.3	-3.3
United States	64.1	67.4	-3.3

<sup>7</sup>Includes countries with less-developed markets outside the index.

Sector and geographic allocations are supplemental information only and complement the fully compliant World Equity Composite GIPS Presentation. Source: Harding Loevner World Equity Model; MSCI Inc. and S&P. MSCI Inc. and S&P do not make any express or implied warranties or representations and shall have no liability whatsoever with respect to any GICS data contained herein.

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# Market Review

Equity markets continued their upward march with positive returns across nearly all sectors and regions. An ongoing, if uneven, economic recovery paralleled the progress being notched against the pandemic. The US adult vaccination rate moved past 50% while developing economies (apart from China and a handful of others), with inadequate vaccine supplies and health care logistics, continued to struggle to get enough shots in arms. A third wave of positive COVID-19 cases in the UK pointed to the risk from proliferating variants that are harder to contain.

US fiscal policy remained center stage as the Biden administration segued from providing pandemic relief for affected individuals and businesses to announcing a bipartisan deal on a trillion-dollar commitment to infrastructure and social investments. Elsewhere, the EU approved an €800 billion (US\$957 billion) recovery fund aimed at infrastructure investment and support for businesses.

The resumption of more normal consumer and business activity has caused shortages and sharp price rises for many goods due to inventory liquidations last year. Corporate capital spending is also expected to underpin the global economy; economists project a rebound in global real investment that should vastly outpace the

## MSCI World Index Performance (USD %)

Geography	2Q 2021	Trailing 12 Months
Canada	10.2	47.0
Europe EMU	7.1	38.3
Europe ex -EMU	8.4	33.1
Japan	-0.2	25.2
Middle East	5.1	22.5
Pacific ex -Japan	4.8	34.3
United States	8.9	42.5
MSCI World Index	7.9	39.7

Sector	2Q 2021	Trailing 12 Months
Communication Services	9.3	46.5
Consumer Discretionary	6.5	48.9
Consumer Staples	6.0	21.2
Energy	9.1	43.1
Financials	6.9	53.3
Health Care	9.3	23.6
Industrials	4.3	45.0
Information Technology	11.6	43.1
Materials	5.5	44.5
Real Estate	10.3	30.5
Utilities	-0.5	15.0

Source: FactSet (as of June 30, 2021). MSCI Inc. and S&P.

lethargic multi-year capex recovery following the global financial crisis. Much of this new investment is expected to come from spending on information technology (IT). *The Economist* projects 42% greater global IT spending in 2021 compared to 2019. Semiconductor makers like Taiwan-based **TSMC** are investing hundreds of billions of dollars both to meet new demand and to avoid a repeat of the current global microchip shortage that has rippled across many different supply chains.

Central banks in the developed world, however, have yet to begin to reverse easy monetary policies, despite a spike in inflation and rising economic growth forecasts, maintaining a belief that current price rises are a temporary phenomenon that can easily be addressed later if it persists. Global fixed income markets rallied as bond yields fell on the dual message of watchful guardian tomorrow and easy money today. Meanwhile, the boom in some commodities such as copper and lumber waned in June. Out of step with the rest (or one step ahead), the People's Bank of China did, delicately, begin the process of unwinding some of its pandemic-driven stimulus.

Amid continued robust equity returns, some of the more frenzied and speculative areas of the market began to cool. In the first quarter, IPOs of special purpose acquisition companies (SPACs) were the poster child for market excess. But activity in the space almost ground to a halt this quarter following comments by the SEC suggesting that heightened SPAC regulation is an agency priority. Even cryptocurrency and other digital asset prices, which had soared over the last twelve months, fell sharply.

In China, where the Communist Party is celebrating its centennial, regulators flexed their muscles, introducing new proposals to rein in private tutoring and to curtail the country's large cryptocurrency mining sector, including measures to prohibit banks from transacting in them.

In contrast to the uniform rally in cheaper stocks of lower-quality and slower-growing companies that characterized markets since early November, style factors reversed late in the quarter and market performance was far more mixed across sectors and regions. Energy stocks outperformed as oil prices moved higher, but other cyclical sectors such as Materials, Industrials, and Financials ceded market leadership to longer-duration growth sectors such as Health Care and IT. Growth stocks surged in June, especially in the US, and the MSCI World Growth Index outperformed its Value counterpart in the quarter (but still lags in the year to date.)

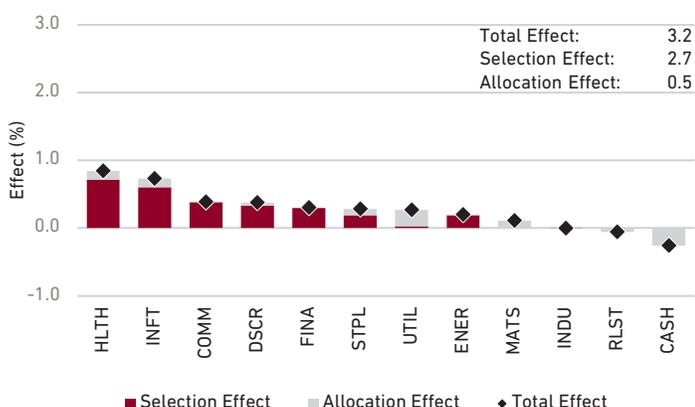
Companies held in the portfolio during the quarter appear in bold type; only the first reference to a particular holding appears in bold. The portfolio is actively managed therefore holdings shown may not be current. Portfolio holdings should not be considered recommendations to buy or sell any security. It should not be assumed that investment in the security identified has been or will be profitable. To request a complete list of holdings for the past year, please contact Harding Loevner. A complete list of holdings at June 30, 2021 is available on page 10 of this report.

From a geographic perspective, the US turned in a strong performance, led by IT and Health Care, along with some large cap media companies. Canada was even stronger, benefiting from the strong pull from the US for its exports of commodities and manufactured goods. Switzerland and Denmark lifted Europe outside the eurozone to its position as the only other region ahead of the index, while the eurozone itself closely trailed. Japan was the weakest region, partially a reaction, along with other north Asian markets, to a cooling China. In addition, Japan reinstated a state of emergency following a steep rise in COVID-19 infections from its low base, likely delaying its own economic recovery.

## Second Quarter 2021 Performance Attribution

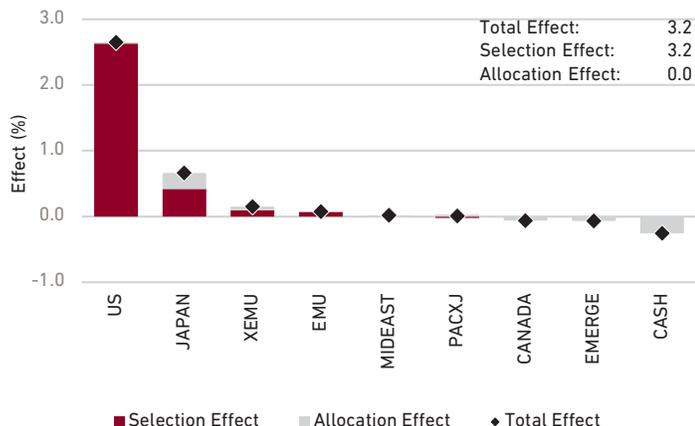
### Sector

World Equity Composite vs. MSCI World Index



### Geography

World Equity Composite vs. MSCI World Index



Source: FactSet; Harding Loevner World Equity Composite; MSCI Inc. and S&P. The total effect shown here may differ from the variance of the Composite performance and benchmark performance shown on the first page of this report due to the way in which FactSet calculates performance attribution. This information is supplemental to the Composite GIPS Presentation.

## Performance and Attribution

The World Equity Composite rose 11.1%, well ahead of the 7.9% rise of the MSCI World Index.

Good stock selection, especially in Health Care and IT, our two largest sectors by weight, delivered most of the quarter's outperformance. Several of our Health Care businesses that facilitate drug development and production were standouts. Shares of China-based contract drug manufacturer **WuXi Biologics** gained after the company projected a backlog of orders that could result in annual revenue growth of more than 60% in 2021 and 40–50% for a number of years thereafter. US-based DNA sequencing specialist **Illumina**, US contract research organization and data analytics firm **IQVIA**, and innovative Danish drug pioneer **Genmab** all saw their share prices rise after each company announced strong first-quarter results accompanied with upbeat forward guidance.

Within IT, shares of US-based computer chip developer **NVIDIA** continued their climb as rising demand across segments—from work-from-home laptops to data centers to cryptocurrency mining rigs—led to shortages that translated into surging prices for its chips. Such was the windfall that NVIDIA even made technical changes to some of its products to make them *less* attractive to cryptocurrency miners, to steer scarce supply towards what it believes are more sustainable uses.

Viewed by geography, the lion's share of excess returns came from good stock performance in the US. In addition to the contributions from NVIDIA and our health care holdings, a pair of IT software and service providers also aided relative returns. Digital payments provider **PayPal** announced strong first-quarter results (with transactions up by over a third) and more product enhancements for its suite of products (including Venmo, Honey, and Braintree) as it continues to deepen its transformation from a digital wallet into a "super-app". Technology-services provider **EPAM** echoed the theme of a better-than-expected first quarter and increased guidance for sales and margins for the full year.

Among the largest detractors from relative performance were **TeamViewer**, a German provider of remote desktop software with a special strength in industrial settings, and US-based pharmaceutical developer **Vertex Pharmaceuticals**. While we believe TeamViewer's use of Alternate Reality (AR) and Internet of Things (IoT) technologies will power future growth, the company's first quarter results and forecast for next quarter's sales were unimpressive. Vertex fell after the company halted development of one of its drug candidates undergoing Phase 2 trials, the failure leaving some investors wondering if Vertex's much-heralded research capabilities might not extend beyond its core franchise in cystic fibrosis, a view we respectfully reject.

## Perspective and Outlook

Regulation of the antitrust variety became an increasingly relevant issue worldwide this quarter following muscular interventions by regulators in Europe, Asia, and the US. The shift in regulatory headwinds is a development we take seriously, as any changes can swiftly reshape entire industries and companies. However, it's also a phenomenon with which we're intimately familiar; we deal with regulatory threats routinely as an explicit factor in our industry analyses, our business assessments, and our projections of companies' growth and profitability.

In the US, there is growing concern that too much market power is concentrated in a handful of companies that dominate their respective industries; even the denizens of the University of Chicago, historically a bastion of free-market ideology, have begun to worry publicly about diminished competition in US markets for goods and services. Under the new presidential administration, antitrust regulators appear to be gearing up to take legal action against big technology firms in particular. The rising threat is epitomized by the bipartisan appointment of Lina Khan, a controversial legal scholar, to the FTC. Khan has argued for a new antitrust framework that counters market power in companies even if their product is free to consumers or has led to lower prices. In Europe, antitrust agencies are already further along in clamping down on the tech behemoths, pursuing active investigations into potential market abuses by **Apple**, **Facebook**, **Google**, and **Amazon.com**. In April, Chinese antitrust regulators sent a strong "kill one chicken to scare the monkeys" message to all companies tempted to abuse the market power derived from potent platform and network effects—imposing a US\$2.8 billion fine on **Alibaba** and summoning 34 leading Chinese technology and e-commerce companies to inform them that they had one month to self-inspect and "completely rectify" any conflicts with recently updated regulations on online competition.

Antitrust is far from the only category of shifting regulatory risk facing many companies globally; environmental regulations also continue to ratchet up as the political and social consensus surrounding climate change solidifies. This is a particular headwind for the oil industry, which suffered a notable setback in May when a Dutch court ordered Royal Dutch Shell, generally considered one of the more progressive oil and gas producers in terms of transitioning toward greener energy sources, to ensure the net CO2 emissions of all its products and operations are 45% lower by 2030. Though the company has the right to appeal, and it is not entirely clear how the Dutch court will enforce its decision (perhaps explaining the negligible impact on Royal Dutch's share price so far), if this judgment is a sign of things to come, it throws doubt on the viability of many global energy companies. That same regulatory trend, however, creates a favorable environment for Finnish biofuels producer **Neste**, which we bought and wrote about last quarter.

Our analysts incorporate the range of potential effects of existing and potential future regulations into their analysis of the competitive structure of each industry. We model regulations in terms of their impact on each of Michael Porter's "Five Forces," our workhorse template for understanding business strategy.<sup>1</sup> We know, for instance, that the threat of new entrants can increase if the state nurtures them, and that the threat of substitution can be tilted by subsidies or prohibitions of alternative products. (See "Google It," on page 8, for how we incorporate the evolving regulatory environment into our updated assessments of **Alphabet**.)

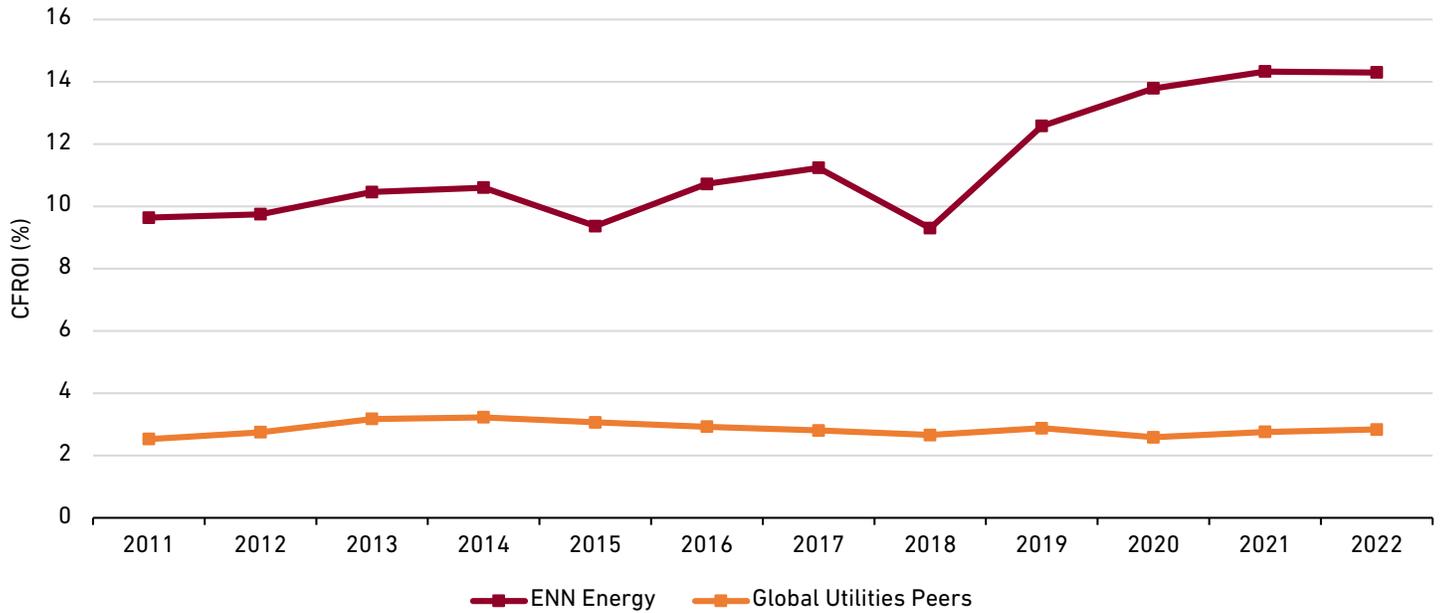
Regulatory influences may affect our view of Porter's competitive forces so negatively that it pushes us to avoid some industries entirely. Electric utilities, for example, are generally treated as regulated monopolies, due to the critical necessity of their product, the asset intensity of their physical infrastructure, and the typical absence of competitive alternatives. Their rates are controlled, and their investments are mandated by regulators with a view to providing reliable power to the residents and industries within reach of their grid. There is broad political support for this approach, and the consequence is to weaken severely the utilities' bargaining power over their customers. Environmental regulations targeted at reducing CO2 emissions also have broad political support and, by requiring the use of specific energy sources, weaken the utilities' bargaining power over their suppliers. The effect of such regulations is to have hamstrung electric utilities to the point where, for the last five years, in aggregate, the global industry has earned a paltry 2% real cash flow return on invested capital (CFROI), a level far below its cost of capital and inadequate to fund or justify further capital investment—an example of why we, as investors, become concerned when we hear antitrust theorists or politicians advocate that large technology companies should be regulated like public utilities!

**We have come to accept the pattern of unpredictable regulatory change in China in recent years as part of the price of admission to investing in some of the world's most attractive high-quality growing companies.**

We cover no electric utilities and only a few companies in the broader Utilities sector; the exceptions are cases where we think regulators have good reason to allow adequate returns on invested capital. **ENN Energy**, a private-sector gas utility in China, is one. ENN earned a five-year average annual CFROI of about 11% while growing at a double-digit pace thanks to regulations pressing businesses and consumers to switch away from coal to natural gas as part of a key step in the transition toward the country's long-term goal of net carbon neutrality.

<sup>1</sup>Of Porter's 15 books, his 2008 *Competitive Strategy: Techniques for Analyzing Industries and Competitors* is perhaps the best single source for explaining the principles we find so helpful in our own analysis.

## Real Cash Flow Return on Investment of ENN Energy vs. Utilities Peers



Source: HOLT as of June 30, 2021. Cash Flow Return on Investment is defined as an approximation of the economic return, or an estimate of the average real internal rate of return, earned by a firm on the portfolio of projects that constitute its operating assets. The metric is real, or inflation-adjusted. The portfolio holding identified above do not represent all of the securities held in the portfolio. It should not be assumed that investment in the securities identified has been or will be profitable.

Though ENN's gas sales are subject to controls on pricing and profits, it is allowed to collect a connection fee from residential users, a lucrative incentive intended to help fund expansion of the gas distribution network. Also, many local governments are promoting the development of communities and industrial parks with smaller carbon footprints. This is proving to be a boon for ENN's integrated energy business, which combines natural gas and renewable energy sources to meet customers' steam, cooling, heating, and electricity needs, and which saw its sales volumes grow 79% YoY this quarter.

In the US and Europe, open political debate tends to presage where new regulatory scrutiny is likely to fall, as well as the magnitude and scope of potential mandates, restrictions, or penalties. There are established legal processes by which companies can argue their side and courts to which they can appeal. In contrast, in less developed markets, regulatory action can come suddenly without warning, and allow companies no opportunity to argue their case or avenue for appeal. We have experienced this kind of seemingly arbitrary regulatory action in China in recent years: from the 2018 freezing of new video game approvals that harmed **Tencent** and **NetEase**; to the 11th-hour suspension of Ant Group's initial public offering due to financial regulatory reforms, and the forced seclusion of Jack Ma, founder of its parent company, Alibaba; to recent proposals to restrict the provision of supplementary tutoring. In each instance, investors (present party included) have suffered from the unpredictable regulatory change, a pattern of caprice we have come to accept as part of the price of admission to investing in some of the world's most attractive high-quality growing companies.

We should note that in addition to incorporating country-level regulatory considerations into our Porter forces assessments and

growth forecasts, we also use country-level risk differentials to adjust the discount rates we use in our valuation models—and on this score China only falls to the middle of the pack. We require higher risk premia to be reflected in discount rates for companies operating in countries with higher legal, governance, and regulatory risks or weak governmental finances (which often lead to a grasping regulatory hand). To assess comparative country risk, we use third-party measures of political stability, rule of law, corruption, and openness of markets from the World Bank's Worldwide Governance Indicators and the Heritage Foundation's Index of Economic Freedom, and sovereign credit ratings from ratings agencies. Together, these risk adjustments lead to country-level real (i.e., after subtracting inflation) discount rates as high as 8.0% for Venezuela, 6.2% for China, and as low as 5.2% for Switzerland and Singapore.

Our monitoring of regulatory risks faced by industries and companies along with our country-level real discount rate premiums tend to tilt us toward markets with lower risk exposure, and away from more vulnerable ones. But predicting which industries, countries, or companies may face unfavorable regulatory change is a hugely imprecise task. These differences in discount rates may not account sufficiently for the capriciousness of regulators. Therefore, our portfolio investment guidelines constrain industry, country, and individual security weights to ensure a high level of diversification and thereby limit the potential impact of regulatory (as well as other) shocks that we fail to foresee. The recent unforeseen shifts in China's regulation of fintech and e-commerce illustrate how limiting our holding in a single country or company—such as Alibaba—can mitigate our exposure.

Lest we leave the impression that regulation and regulatory changes provide only risk and not their own form of opportunity, consider the global automotive industry, where environmental regulations such as emissions and fuel-efficiency standards have increased manufacturing costs, but have also sparked innovation, providing potential growth opportunities for innovative suppliers able to walk the tight rope between regulatory mandates and market preferences. Likewise, the entire Health Care sector faces perennial regulatory pressure as governments implement various methods of constraining the prices of medical treatments. It is just over a decade since we sold nearly half of our Health Care holdings in a single quarter out of reasonable fear that the Obama Administration would create a powerful health care entity that could control pricing and volume of drug sales in the US, crushing the profitability of pharma companies operating there, so we have been alert to the regulatory risks entailed in that industry. But Health Care is currently one of our largest sector weights, significantly greater than the index weight. The pharmaceutical industry enjoys key benefits bestowed by legal and regulatory frameworks—patent protection for new drugs (which keeps rivalry at bay), safety regulations (which raise the bar for less-experienced new entrants), and government funding of drugs for large portions of the population—that have kept returns to investing in research, development, and drug manufacturing high for many decades. This regulatory framework, though altered from time to time, has been effective at sustaining innovation in drug development, to the benefit of many patients not only within the US, but throughout the world. It also underpins the long-term growth of many of our Health Care holdings.

## Portfolio Highlights

In recent decades, thanks to a deeper understanding of underlying biological mechanisms, drug development has progressed in leaps and bounds as research into new compounds has evolved beyond a trial-and-error approach. Whereas traditional methods screened large numbers of compounds in a scattershot search for desirable therapeutic effects, researchers now look for compounds that only bind with previously identified targets associated with specific disease vectors. Vertex has been a trailblazer of this new approach and its generalized adoption in conjunction with a reduction in the cost of gene sequencing at companies like Illumina is ushering in a new era, in which many of the treatments we receive will increasingly be more precise, personalized, and effective than they are today.

To design drugs with the precise shapes required to bind to the intended biological targets at the right location, scientists need to determine the molecular structure of the targets. FEI, acquired by **Thermo Fisher Scientific** in 2016, is a pioneer in cryogenic electron microscopy (cryo-EM), an innovation in atomic resolution imaging that was recognized with the 2017 Nobel Prize in chemistry. Cryo-EM is simpler to use than older techniques and produces three-dimensional biochemical maps with far more detail which are vastly expanding the range of targets available for potential exploitation.

The types of drugs are also expanding, beyond traditional small molecule drugs to next-generation formats such as “biologic” drugs, in particular a sub-category called monoclonal antibodies (mAb). These mAbs, roughly 1,000x larger than small-molecule drugs, are too complex to be synthesized chemically and thus need to be produced biologically from specially engineered cells. Biologic drugs have great therapeutic and commercial potential in oncology and autoimmune diseases, areas with large patient populations with unmet needs. Of the top 30 global blockbuster drugs in 2020, over two thirds were new biologics, including Herceptin and Avastin, oncology drugs manufactured by **Roche** and its Japanese partner, **Chugai Pharmaceutical**.<sup>2</sup>

In many cases, bigger really is better. Of the top 30 global blockbuster drugs in 2020, over two thirds were monoclonal antibodies, a sub-category of next-generation “biologics” roughly 1,000x larger than traditional small molecule drugs.

Innovations in biologics have sparked a wave of drug discovery efforts across the biopharma industry, and we are invested in a handful of participants well-placed to deliver persistent and profitable growth. Genmab is a pioneer in new types of mAb which binds with not just one but multiple therapeutic target sites. **Abcam**, based in the UK, produces and distributes high-quality research-grade antibodies that allow live cells to be analyzed at a molecular level. A significant drawback of biologics, however, is the demanding and highly complex manufacturing process with the attendant exacting regulatory scrutiny. Many smaller biopharma companies with promising drug candidates simply don't have the capital or know-how to manufacture large-molecule drugs themselves. As a result, small- and mid-sized biotech companies, and even some large ones, often outsource development and commercial production to contract development and manufacturing organizations (CDMOs), such as **Lonza** and **WuXi Biologics**, as well as **Patheon**, another Thermo Fisher subsidiary. Outsourcing speeds up the development process by leveraging manufacturing expertise and reduces the need for capital expenditure.

The strong growth in biologic drugs emerging from the development phase to full production is a boon to **Danaher**, a leading provider of highly specialized equipment for manufacturing them. Its bioprocessing business grew over 20% in Q1, a growth rate that *excludes* the additional boost to revenues emanating from vaccine-related demand. **Spirax-Sarco**, a British industrial company, is another enabler of the biologics industry; its Watson-Marlow unit is a leading maker of peristaltic pumps, a critical component of bioprocessing. We see companies like these as the “shovel makers” in a gold rush across the life sciences that, after years of hype, is finally approaching what could be some deep veins.

<sup>2</sup>Morgan Stanley Equity Research.

# Google It: Modeling the Impact of the New Regulatory Environment on Alphabet

By Uday Cheruvu, CFA

The regulatory drumbeat is growing louder. Following the opening salvos launched by policymakers in Europe and China, there has been rare bipartisan consensus in the US that something needs to be done to rein in technology giants. We have no proprietary insights to offer about the likely path for future regulations but we do believe that the Porter Forces framework we have employed for over 30 years is a useful lens through which to view and model the impact of current and prospective regulatory changes.

The Porter Five Forces, or Porter Forces, is a strategic framework developed by Harvard professor Michael Porter for understanding and modelling the distinct competitive forces that shape industry structure. The five forces consist of: the threat of new entrants, the threat of substitution, the bargaining power of suppliers, the bargaining power of buyers, and industry rivalry. These five forces interact to mold the competitive intensity faced by companies in different industries. The greater the competitive intensity, the greater the downward pressure on revenue growth and profit margins, and vice versa. Government intervention and regulations are notably absent from this list because governmental actions can affect any of the five forces in different ways.

One global company that attracts a disproportionate amount of regulatory scrutiny is Alphabet, the owner of Google. We continue to invest in Alphabet because we believe the competitive forces aligned against it are weak and likely to remain so for the foreseeable future. According to the Porter framework, weak and stable competitive forces imply that Alphabet can generate supernormal profits indefinitely. Its competitive strength arises from the confluence of three factors: ubiquitous network effects across a range of products; cast-iron intellectual property (IP) covering search, maps, and mobile operating systems; and oceans of data that spring from its vast user base.

These three factors work in concert, feeding off each other in a virtuous circle that reinforces Alphabet's competitive position. Alphabet's IP and patents allow it to create high-quality products which users prefer over competing offerings. For example, Google Search has about 90% market share of all searches in the US. Each time a user accesses an Alphabet product, Alphabet collects more user data, which, in turn, helps advertisers and publishers reap higher returns from their ad campaigns on Alphabet's Ad Network. This feedback loop powers Alphabet's profit growth and funds its reinvestment in product development that further widens its competitive moat.

Alphabet's competitive position, in other words, is about as good as it gets, which is why its regulators have the firm's business model firmly in their sights. So far, regulatory actions have lined up along three axes: curtailing the popularity of its search engine; limiting Alphabet's freedom in managing its advertising network or restricting its size; and prohibiting further acquisitions so as to restrain its expansion into adjacent business lines. Each of these regulatory efforts can be understood using Porter's framework.

## Decoupling the Search Business

European regulators were the first to attempt to disrupt Google Search's dominance. Alphabet put itself in this position by making Google Search the default search engine on the Android mobile operating system that it freely provided to smartphone manufacturers. Android phones accounted for 70% of the European mobile market and the remaining phone manufacturers (who did not use Android Alphabet) were paid a fee to make Google Search the default on their phones. Thus, Google Search became the default search engine on nearly all mobile phones. Regulators attacked both these business practices—by prohibiting Alphabet from making any payments to phone manufacturers, and forcing phone manufacturers to give users a choice of default search engine—under the belief that giving users more choice would lead to market share drifting away from Google Search. The intervention, however, proved to be an abject failure. Following these regulatory interventions, Google Search's market share in European mobile search remained unchanged at roughly 97%. When viewed through Porter's framework, the failure to dethrone Google Search seems an obvious, inevitable conclusion.

**Threat of New Entrants (ToNE)** – The massive upfront cost for Alphabet's competitors of creating a new search engine was not reduced by this regulation and so ToNE was unchanged.

**Substitution** – Decoupling search from Alphabet's other products has no impact in and of itself on the engine's clear superiority and therefore the threat of substitution of its product in the industry.

**Bargaining Power of Buyers (BPoB)** – Advertisements are sold via an auction mechanism which would be unaffected by this regulation. So BPoB remained unchanged.

**Bargaining Power of Suppliers (BPoS)** – Since Alphabet cannot pay phone manufacturers anymore, phone manufacturers will no longer be suppliers to Alphabet. As a result, supplier concentration and importance to Alphabet decreases, leading to *weaker* BPoS.

**Rivalry** – Since Alphabet is the only company prevented from entering into exclusive relationships with handset manufacturers, this opens the door for rival companies to have their search engines preinstalled on devices instead, potentially tilting the playing field in their favor. The quality of rival search products, however, continues to lag far behind those provided by Alphabet. Even when given a choice, users invariably opt for Google Search, so, for the time being at least, Alphabet is unlikely to see its share of mobile searches decline.

Because the regulations ultimately have had a negligible impact on the Porter forces acting on Alphabet's businesses, its long-term value is unchanged.

## Restriction on Google Ad Networks

Making the case that Alphabet's vertical integration of its products and advertising network limits competition in online advertising, US and European regulators are looking into ways of unbundling its offerings, such as Google Ad Manager and its advertising inventory. Many forms of competitive restrictions are being proposed but the main thrust appears to be on changing ToNE, BPoB, and Industry Rivalry forces, while leaving Substitution and BPoS forces broadly unchanged. For example, unbundling of Google's ad inventory would mean that third-party ad-tech providers could also connect to this inventory and customers could use apps from them instead of Google Ad Manager.

**ToNE** – Alphabet's ability to compete may be limited by encouraging new entrants into the online advertising market. However, the capital costs required to build ad-tech products and develop relationships with publishers and advertisers will mean that any increase in ToNE is likely to be modest.

**Rivalry** – Restricting Alphabet's anticompetitive actions, such as forcing it to open its advertising network, may help rivals gain market share. But Alphabet, because of its size, already sets industry benchmarks for the "take rate," or percentage of their ad spend that advertisers pay for accessing ad-tech solutions. Although regulations may allow rivals to win over some of Alphabet's customers, it's unlikely Alphabet will ever need to compete on price. As a result, the impact on rivalry is likely to be restrained.

**BPoB** – Regulators believe that if they can shrink Alphabet's market share, the BPoB should increase. What this fails to account for, however, is the substantial value embedded in Alphabet's reams of data on consumer preferences and behavior. Advertisers who need this information to maximize the return from their marketing budgets will be unable to increase their bargaining power even as Alphabet's overall market share declines. This implies that, even if the desired market share transfer occurs as regulators intend, overall industry BPoB will probably stay roughly the same and competitive intensity within the industry is unlikely to increase.

What this shows is that although we might expect a deterioration in the competitive dynamics for Alphabet from increased industry rivalry and a reduction in its total addressable market, crucially the profitability of its business is unlikely to change.

## Restriction on M&A Within Industry and Entry Into New Adjacent Business Lines

US and International regulators hope that preventing Alphabet from swallowing small competitors will boost competition. However, while restricting M&A may increase industry rivalry, it has no direct impact on any of the other forces. Regulators also fear Alphabet's expansion into adjacent business areas such as travel or jobs, but they run into the same situation; while restricting Alphabet's reach may ultimately reduce the size of its total addressable market, it's unlikely to change any of the competitive forces currently shaping its industry.

The Porter framework in no way improves our ability to predict the specific regulatory lashings or hindrances Alphabet will face. However, the framework does allow us to model the impact of different potential regulatory interventions. This work leads us to believe increased regulation may have a significant impact on Alphabet's addressable market and therefore on its revenue growth, but the effect on its profit margins is likely to be modest. In particular, it suggests that regulatory interventions are unlikely to break the virtuous circle securing Alphabet's competitive advantage.

## World Equity Holdings (as of June 30, 2021)

<b>Communication Services</b>	Country	End Wt. (%)
<b>Alphabet</b> (Internet products and services)	US	3.9
<b>CD Projekt</b> (Video game developer)	Poland	0.3
<b>Disney</b> (Diversified media and entertainment provider)	US	1.1
<b>Facebook</b> (Social network)	US	3.1
<b>NetEase</b> (Gaming and internet services)	China	0.4
<b>Tencent</b> (Internet and IT services)	China	0.5
<b>Consumer Discretionary</b>		
<b>Alibaba</b> (E-commerce retailer)	China	0.4
<b>Amazon.com</b> (E-commerce retailer)	US	3.2
<b>eBay</b> (E-commerce retailer)	US	1.8
<b>Etsy</b> (E-commerce retailer)	US	1.1
<b>Nike</b> (Athletic footwear and apparel retailer)	US	2.0
<b>Trip.com Group</b> (Online travel services)	China	0.5
<b>VF Corporation</b> (Footwear and apparel retailer)	US	0.9
<b>Consumer Staples</b>		
<b>Estée Lauder</b> (Cosmetics manufacturer)	US	1.0
<b>L'Oréal</b> (Cosmetics manufacturer)	France	1.2
<b>Energy</b>		
<b>Neste</b> (Oil refiner and engineering services)	Finland	1.1
<b>Schlumberger</b> (Oilfield services)	US	1.3
<b>Financials</b>		
<b>AIA Group</b> (Insurance provider)	Hong Kong	1.7
<b>Bank Central Asia</b> (Commercial bank)	Indonesia	0.4
<b>CME Group</b> (Derivatives exchange and trading services)	US	1.5
<b>DBS Group</b> (Commercial bank)	Singapore	1.7
<b>First Republic Bank</b> (Private bank and wealth manager)	US	3.9
<b>HDFC Bank</b> (Commercial bank)	India	0.5
<b>Itaú Unibanco</b> (Commercial bank)	Brazil	0.4
<b>SVB Financial Group</b> (Commercial bank)	US	3.6
<b>Tradeweb</b> (Electronic financial trading services)	US	1.2
<b>Health Care</b>		
<b>Abcam</b> (Life science services)	UK	1.2
<b>Alcon</b> (Eye care products manufacturer)	Switzerland	1.2
<b>Align Technology</b> (Orthodontics products manufacturer)	US	1.4
<b>Chugai Pharmaceutical</b> (Pharma manufacturer)	Japan	1.1
<b>Danaher</b> (Diversified science and tech products and svcs.)	US	1.3
<b>Edwards Lifesciences</b> (Medical device manufacturer)	US	1.0
<b>Genmab</b> (Biotechnology producer)	Denmark	1.2
<b>Illumina</b> (Life science products and services)	US	2.6
<b>Intuitive Surgical</b> (Medical equipment manufacturer)	US	1.0
<b>IQVIA</b> (Health care services)	US	0.9
<b>Lonza</b> (Life science products manufacturer)	Switzerland	1.4
<b>Roche</b> (Pharma and diagnostic equipment manufacturer)	Switzerland	1.5
<b>Sysmex</b> (Clinical laboratory equipment manufacturer)	Japan	1.6

<b>Health Care</b>	Country	End Wt. (%)
<b>Thermo Fisher Scientific</b> (Health care products & svcs.)	US	1.3
<b>UnitedHealth Group</b> (Health care support services)	US	1.0
<b>Vertex Pharmaceuticals</b> (Pharma manufacturer)	US	1.7
<b>WuXi Biologics</b> (Biopharma manufacturer)	China	0.5
<b>Industrials</b>		
<b>Ametek</b> (Electronic instruments manufacturer)	US	0.9
<b>Atlas Copco</b> (Industrial equipment manufacturer)	Sweden	1.2
<b>Country Garden Services</b> (Residential property mgr.)	China	0.4
<b>Epiroc</b> (Industrial equipment manufacturer)	Sweden	1.0
<b>John Deere</b> (Industrial equipment manufacturer)	US	2.3
<b>MISUMI Group</b> (Machinery-parts supplier)	Japan	0.7
<b>Roper</b> (Diversified technology businesses operator)	US	0.8
<b>Schneider Electric</b> (Energy management products)	France	1.5
<b>Spirax-Sarco</b> (Industrial components manufacturer)	UK	0.6
<b>VAT Group</b> (Vacuum valve manufacturer)	Switzerland	0.9
<b>Verisk</b> (Risk analytics and assessment services)	US	0.7
<b>Information Technology</b>		
<b>Accenture</b> (Professional services consultant)	US	1.1
<b>Adobe</b> (Software developer)	US	2.0
<b>Adyen</b> (Payment processing services)	Netherlands	1.4
<b>Apple</b> (Consumer electronics and software developer)	US	1.0
<b>ASML</b> (Semiconductor equipment manufacturer)	Netherlands	1.7
<b>EPAM</b> (IT consultant)	US	1.7
<b>Keyence</b> (Sensor and measurement equipment mfr.)	Japan	1.1
<b>Mastercard</b> (Electronic payment services)	US	0.9
<b>Microsoft</b> (Consumer electronics and software developer)	US	2.2
<b>NVIDIA</b> (Semiconductor chip designer)	US	1.6
<b>PayPal</b> (Electronic payment services)	US	2.9
<b>salesforce.com</b> (Customer relationship mgmt. software)	US	1.0
<b>Samsung Electronics</b> (Electronics manufacturer)	South Korea	0.4
<b>Synopsys</b> (Chip-design software developer)	US	1.3
<b>TeamViewer</b> (Remote connectivity software developer)	Germany	1.4
<b>The Trade Desk</b> (Digital advertising management svcs.)	US	1.0
<b>TSMC</b> (Semiconductor manufacturer)	Taiwan	0.4
<b>Workday</b> (Enterprise resource planning software)	US	0.9
<b>Xero</b> (Accounting software developer)	Australia	0.6
<b>Materials</b>		
<b>No Holdings</b>		
<b>Real Estate</b>		
<b>No Holdings</b>		
<b>Utilities</b>		
<b>ENN Energy</b> (Gas pipeline operator)	China	0.2
<b>Cash</b>		3.6

Model Portfolio holdings are supplemental information only and complement the fully compliant World Equity Composite GIPS Presentation. The portfolio is actively managed therefore holdings shown may not be current. Portfolio holdings should not be considered recommendations to buy or sell any security. It should not be assumed that investment in the security identified has been or will be profitable. To request a complete list of portfolio holdings for the past year contact Harding Loevner.

## 2Q21 Contributors to Relative Return (%)

Largest Contributors	Sector	Avg. Weight		Effect
		HL World	MSCI World	
Illumina	HLTH	2.4	0.1	0.33
PayPal	INFT	3.2	0.5	0.31
EPAM	INFT	1.6	<0.1	0.29
NVIDIA	INFT	1.3	0.7	0.25
Lonza	HLTH	1.3	0.1	0.22

## 2Q21 Detractors from Relative Return (%)

Largest Detractors	Sector	Avg. Weight		Effect
		HL World	MSCI World	
John Deere	INDU	2.7	0.2	-0.35
Vertex Pharmaceuticals	HLTH	1.9	0.1	-0.26
TeamViewer	INFT	1.3	<0.1	-0.25
Standard Chartered	FINA	1.2	<0.1	-0.18
Workday	INFT	1.1	0.1	-0.13

\*Company was not held in the portfolio; its absence had an impact on the portfolio's return relative to the index.

## Last 12 Mos. Contributors to Relative Return (%)

Largest Contributors	Sector	Avg. Weight		Effect
		HL World	MSCI World	
SVB Financial Group	FINA	2.7	<0.1	1.66
First Republic Bank	FINA	3.9	<0.1	1.07
John Deere	INDU	1.9	0.2	0.91
Align Technology	HLTH	1.5	0.1	0.84
PayPal	INFT	4.2	0.5	0.76

## Last 12 Mos. Detractors from Relative Return (%)

Largest Detractors	Sector	Avg. Weight		Effect
		HL World	MSCI World	
Vertex Pharmaceuticals	HLTH	2.4	0.1	-2.08
TeamViewer	INFT	0.6	<0.1	-0.68
Tesla*	DSCR	0.0	0.8	-0.67
Symrise	MATS	1.5	<0.1	-0.45
Verisk	INDU	1.5	0.1	-0.40

## Portfolio Characteristics

Quality and Growth	HL World	MSCI World
Profit Margin <sup>1</sup> (%)	19.8	12.5
Return on Assets <sup>1</sup> (%)	9.3	6.4
Return on Equity <sup>1</sup> (%)	19.0	14.7
Debt/Equity Ratio <sup>1</sup> (%)	42.4	73.3
Std. Dev. of 5 Year ROE <sup>1</sup> (%)	4.6	6.2
Sales Growth <sup>1,2</sup> (%)	12.3	5.2
Earnings Growth <sup>1,2</sup> (%)	16.9	8.2
Cash Flow Growth <sup>1,2</sup> (%)	17.5	10.0
Dividend Growth <sup>1,2</sup> (%)	8.4	8.4
Size and Turnover	HL World	MSCI World
Wtd. Median Mkt. Cap. (US \$B)	74.3	97.9
Wtd. Avg. Mkt. Cap. (US \$B)	333.6	370.2
Turnover <sup>3</sup> (Annual %)	29.4	-

Size and Valuation	HL World	MSCI World
Alpha <sup>2</sup> (%)	5.19	-
Beta <sup>2</sup>	0.95	-
R-Squared <sup>2</sup>	0.91	-
Active Share <sup>3</sup> (%)	85	-
Standard Deviation <sup>2</sup> (%)	14.51	14.55
Sharpe Ratio <sup>2</sup>	1.33	0.98
Tracking Error <sup>2</sup> (%)	4.4	-
Information Ratio <sup>2</sup>	1.16	-
Up/Down Capture <sup>2</sup>	112/90	-
Price/Earnings <sup>4</sup>	37.2	24.2
Price/Cash Flow <sup>4</sup>	29.5	15.7
Price/Book <sup>4</sup>	6.3	3.1
Dividend Yield <sup>5</sup> (%)	0.6	1.6

<sup>1</sup>Weighted median; <sup>2</sup>Trailing five years, annualized; <sup>3</sup>Five-year average; <sup>4</sup>Weighted harmonic mean; <sup>5</sup>Weighted mean. Source (Risk characteristics): eVestment Alliance (eA); Harding Loevner World Equity Composite, based on the Composite returns; MSCI Inc. Source (other characteristics): FactSet (Run Date: July 5, 2021, based on the latest available data in FactSet on this date.); Harding Loevner World Equity Model, based on the underlying holdings; MSCI Inc.

## Completed Portfolio Transactions

Positions Established	Country	Sector
Country Garden Services	China	INDU
Epiroc	Sweden	INDU
The Trade Desk	US	INFT
WuXi Biologics	China	HLTH
Xero	Australia	INFT

Positions Sold	Country	Sector
Kakaku.com	Japan	COMM
Standard Chartered	UK	FINA

The portfolio is actively managed therefore holdings identified above do not represent all of the securities held in the portfolio and holdings may not be current. It should not be assumed that investment in the securities identified has been or will be profitable. The following information is available upon request: (1) information describing the methodology of the contribution data in the charts above; and (2) a list showing the weight and relative contribution of all holdings during the quarter and the last 12 months. Past performance does not guarantee future results. In the charts above, "weight" is the average percentage weight of the holding during the period, and "contribution" is the contribution to overall relative performance over the period. Contributors and detractors exclude cash and securities in the Composite not held in the Model Portfolio. Quarterly data is not annualized. Portfolio attribution and characteristics are supplemental information only and complement the fully compliant World Equity Composite GIPS Presentation. Portfolio holdings should not be considered recommendations to buy or sell any security.

## World Equity Composite Performance (as of June 30, 2021)

	HL World Equity Gross (%)	HL World Equity Net (%)	MSCI World <sup>1</sup> (%)	MSCI ACWI <sup>2</sup> (%)	HL World Equity 3-yr. Std. Deviation <sup>3</sup> (%)	MSCI World 3-yr. Std. Deviation <sup>3</sup> (%)	MSCI ACWI 3-yr. Std. Deviation <sup>3</sup> (%)	Internal Dispersion <sup>4</sup> (%)	No. of Accounts	Composite Assets (\$M)	Firm Assets (\$M)
2021 YTD <sup>5</sup>	14.28	14.05	13.33	12.56	17.79	17.95	17.70	N.A. <sup>6</sup>	5	3,070	77,155
2020	35.09	34.55	16.50	16.82	17.94	18.26	18.12	N.M. <sup>7</sup>	5	3,140	74,496
2019	30.60	30.07	28.40	27.30	12.28	11.13	11.21	N.M.	5	2,431	64,306
2018	-8.79	-9.16	-8.20	-8.93	11.53	10.39	10.48	N.M.	4	1,688	49,892
2017	30.93	30.41	23.07	24.62	10.66	10.24	10.37	1.1	7	3,933	54,003
2016	7.59	7.14	8.15	8.48	10.91	10.94	11.07	0.6	7	3,092	38,996
2015	5.94	5.48	-0.32	-1.84	+	+	+	N.M.	7	2,903	33,296
2014	7.49	7.04	5.50	4.71	+	+	+	N.M.	5	2,138	35,005
2013 <sup>8</sup>	7.49	7.48	8.11	7.42	+	+	+	N.A.	3	1,540	33,142

<sup>1</sup>Benchmark Index; <sup>2</sup>Supplemental Index; <sup>3</sup>Variability of the composite, gross of fees, and the Index returns over the preceding 36-month period, annualized; <sup>4</sup>Asset-weighted standard deviation (gross of fees); <sup>5</sup>The 2021 YTD performance returns and assets shown are preliminary; <sup>6</sup>N.A.—Internal dispersion less than a 12-month period; <sup>7</sup>N.M.—Information is not statistically significant due to an insufficient number of portfolios in the Composite for the entire year; <sup>8</sup>2013 represents the partial year October 1, 2013 to December 31, 2013 +Less than 36 months of return data.

The World Equity Composite contains fully discretionary, fee-paying accounts investing in US and non-US equity and equity-equivalent securities and cash reserves, and is measured against the MSCI World Total Return Index (Gross) for comparison purposes. Returns include the effect of foreign currency exchange rates. The exchange rate source of the benchmark is Reuters. The exchange rate source of the Composite is Bloomberg. Additional information about the benchmark, including the percentage of composite assets invested in countries or regions not included in the benchmark, is available upon request.

The MSCI World Index is a free float adjusted market capitalization index that is designed to measure global developed market equity performance. The Index consists of 23 developed market countries. The MSCI All Country World Index is a free float adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets. The Index consists of 50 developed and emerging market countries. You cannot invest directly in these Indices.

Harding Loevner LP claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Harding Loevner has been independently verified for the period November 1, 1989 through March 31, 2021. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. The World Equity Composite has been examined for the periods October 1, 2013 through March 31, 2021. The verification and performance examination reports are available upon request.

Harding Loevner LP is an investment adviser registered with the Securities and Exchange Commission. Harding Loevner is an affiliate of Affiliated Managers Group, Inc. (NYSE: AMG), an investment holding company with stakes in a diverse group of boutique firms. A list of composite descriptions, a list of limited distribution pooled fund descriptions, and a list of broad distribution pooled funds are available upon request.

Results are based on fully discretionary accounts under management, including those accounts no longer with the firm. Composite performance is presented gross of foreign withholding taxes on dividends, interest income and capital gains. Additional information is available upon request. Past performance does not guarantee future results. Policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request.

The US dollar is the currency used to express performance. Returns are presented both gross and net of management fees and include the reinvestment of all income. Net returns are calculated using actual fees. Actual returns will be reduced by investment advisory fees and other expenses that may be incurred in the management of the account. The standard fee schedule generally applied to separate World Equity accounts is 1.00% annually of the market value up to \$20 million; 0.50% of amounts from \$20 million to \$100 million; 0.45% of amounts from \$100 million to \$250 million; 0.40% of amounts from \$250 million to \$500 million; above \$500 million on request. Actual investment advisory fees incurred by clients may vary. The annual composite dispersion presented is an asset-weighted standard deviation calculated for the accounts in the composite the entire year.

The World Equity Composite was created on September 30, 2013 and the performance inception date is October 1, 2013.