

## Thematic Investing

Everybody Counts! Diversity & Inclusion  
Primer

Thematic Investing

*This is a redaction of a report published March 2, 2021***Gender, Ethnic, Racial, LGBT+, Disabilities: don't deny D&I**

Rule 101 of investing is to diversify investment capital to maximise returns. So why don't we do the same with human capital? It will take 257 years to close the gender economic gap at today's rate, in 2020 there were no black senior executives in any of the FTSE 100 companies, 90% of children with disabilities in EM countries do not attend school and >75% of Nasdaq companies do not have at least 1 woman and 1 under-represented minority or LGBT+ member on the board. But the times they are a-changing with major demographic shifts. Today in the US, there are already more kids from ethnic minority backgrounds than white peers and more Spanish speakers than in Spain, while globally women are accumulating financial assets 1.5x faster than men.

**Diversity needs to diversify, inclusion needs a voice!**

From the #MeToo movement to #BlackLivesMatter, awareness of injustices faced by under-represented and marginalised groups is at an all-time high. Within corporate Diversity & Inclusion (D&I) policies, the most prevalent focus area is gender diversity at 96% of firms. However, there is a risk that other groups could fall behind, e.g. there are 4x more Google searches for gender equality than either LGBTQ or racial equality. Moreover, only 58% and 25% of firms respectively include LGBTQ and Disability groups as part of their wider D&I programs. Other D&I areas under the radar are religious minorities and intergenerational groups.

**Poor D&I costing trillions: COVID, Gen Z, ESG could help?**

D&I must go hand in hand. While public & corporate understanding of the importance of Diversity has improved in recent years, we believe Inclusion hasn't and needs to be more widely promoted. COVID (flexible WFH arrangements, childcare support), Gen Z (hashtag activism, "clicktivists") and ESG assets (US\$20tn over next 20Y) are just some of the catalysts that could change this. Meanwhile, not doing the right thing also comes with an economic cost. Continued racial inequality could cost the US economy US\$1-1.5tn in lost consumption and investment over the next decade.

**\$70tn economic boost if we had harnessed D&I since 1990**

While diversity is having a seat at the table, inclusion is about having a voice! With D&I as a core principle, society can build back better, fairer and richer post-COVID. Our US Economics team flags that closing the gender & race gaps would have generated US\$2.6tn more in economic output in 2019, and the cumulative gains starting in 1990 would have been close to US\$70tn. Furthermore, if US Latinos were a country it would be the world's 8<sup>th</sup> largest economy, full Gender Equality could increase world GDP up to US\$28tn by 2025 and the LGBTQ+ community is equivalent to the 4<sup>th</sup> largest economy in the world at US\$3.9tn. All in all, our ESG team finds that S&P 500 companies with above-median gender diversity on their boards see 15% higher ROE, and for companies with ethnic and racially diversified workforce this is 8% higher. And overall more diverse companies see lower earnings risk one year out compared with less diverse peers

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules.

Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.

**BofA Securities does and seeks to do business with issuers 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. Investors should consider this report as only a single factor in making their investment decision.**

Refer to important disclosures on page 17 to 18.

04 March 2021

Equity  
Global

**Haim Israel >>**  
Equity Strategist  
Merrill Lynch (Israel)

**Felix Tran >>**  
Equity Strategist  
MLI (UK)

**Savita Subramanian**  
Equity & Quant Strategist  
BofAS

**Marisa Sullivan, CFA**  
Equity & Quant Strategist  
BofAS

**Lauma Kalns-Timans >>**  
Equity Strategist  
MLI (UK)

**Joseph Song**  
US Economist  
BofAS

**Michelle Meyer**  
US Economist  
BofAS

**Jill Carey Hall, CFA**  
Equity & Quant Strategist  
BofAS

**Menka Bajaj >>**  
EMEA ESG Strategist  
MLI (UK)

**Martyn Briggs >>**  
Equity Strategist  
MLI (UK)

# Contents

D&ID You Know?	3
Executive Summary: all together now!	5
Economics of D&I: reaching full potential	8
ESG Matters: want better results? Diversify!	11
Diversity & Inclusion 101	13



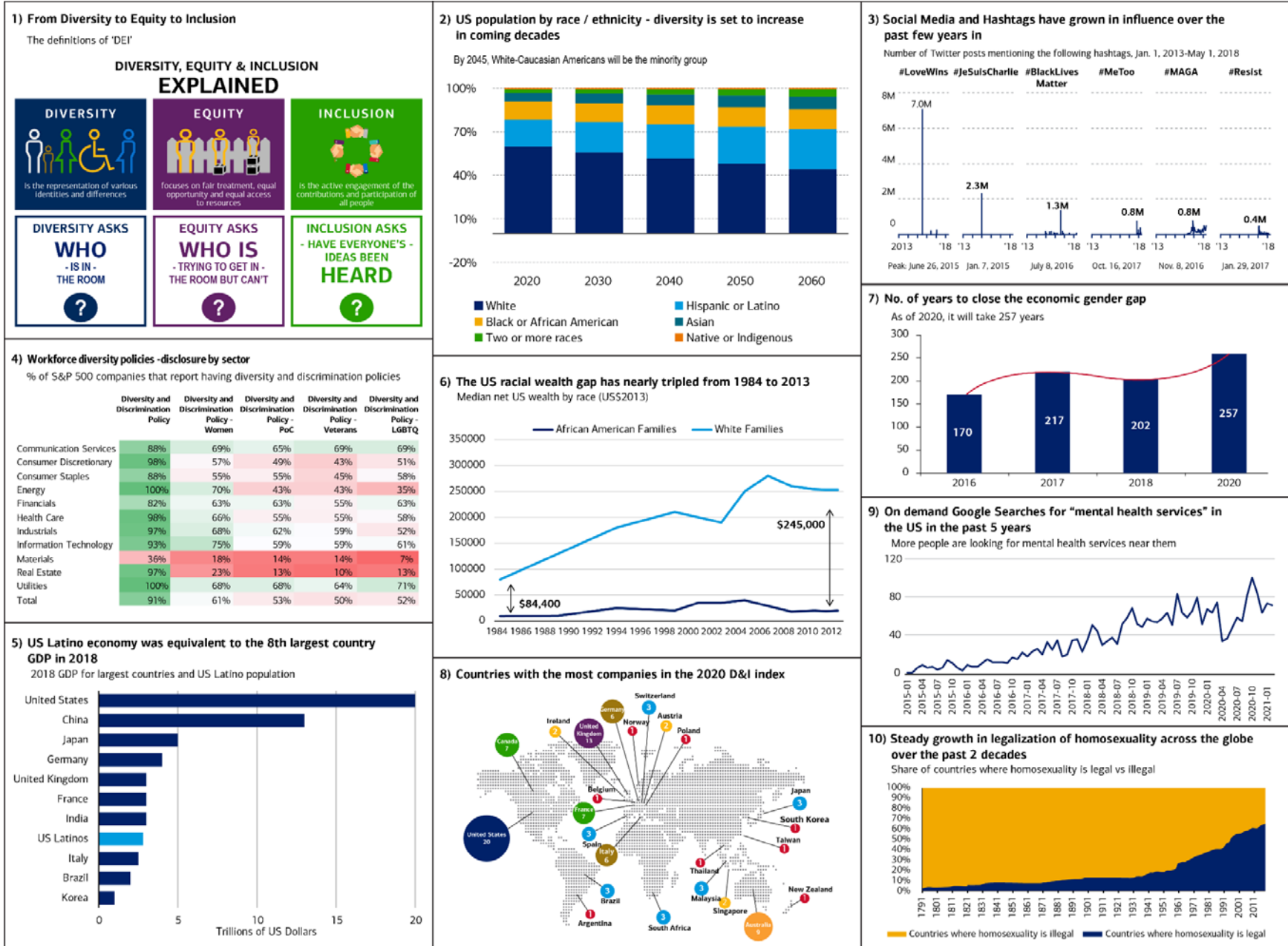
## D&ID You Know?

- More than 75% of the Nasdaq's roughly 3,200 companies do not have at least 1 woman and 1 under-represented minority or LGBTQ member on the board (source: Nasdaq, New York Times, CNBC)
- At the current rate, it will take 257 years for the economic gender gap to close, meaning full parity will only happen by 2277 (source: WEF 2020)
- Google's AI speech recognition software is 70% more likely to understand men than women (source: Caroline Criado Perez, Invisible Women)
- Companies with the highest racial diversity were able to generate nearly 15x more sales revenue than firms with the lowest levels (source: S&P Global Ratings, Cedric Herring, University of Illinois, Chicago)
- If LGBTQ+ were a nation, it would be the 4<sup>th</sup> largest economy in the world at US\$3.9 trillion (source: LGBT Capital, Nick Wolny, Entrepreneur)
- ... And If the US Latino economy were a country, it would be the 8<sup>th</sup> largest economy in the world, ahead of Brazil, Italy and South Korea (source: LDC)
- A more diverse group of traders was 58% better at setting accurate prices compared with a homogenous group (source: PwC, CTI Research, PNAS)
- A black child born in the UK has a 1 in 17 million chance of becoming Prime Minister (vs a white child at 1 in 1.4 million and a white child who went to private school at 1 in 200,000) (source: Diversify, BBC)
- For the first time in six years in 2020 there were no black chairs, chief executives or finance chiefs in the FTSE 100 (source: Green Park Consultancy, BBC)
- Only 1 company in the S&P 500 is run by a black female CEO today, and only 8 companies (<2%) have at least 50% female management teams (Bloomberg)
- Women account for only 1/3 of the world's scientific researchers yet have been pivotal to COVID vaccine development, e.g. Katalin Karikó (BioNTech), Sarah Gilbert (Oxford/AstraZeneca) and Nita Patel (Novavax) (source: UN, Bloomberg)
- There are more men called 'Dave' than women managing funds in the UK, and more CEOs in Australia called 'Andy' than female chief executives (source: Morningstar, ABC)
- Around 70 countries continue to criminalise homosexuality (source: World Bank)
- 90% of children with disabilities in EMs do not attend school (source: World Bank)
- There are 14 million disabled people in the UK (20% of population), yet in Parliament only 5 out of 650 MPs (0.7%) are disabled representing this electorate (source: Disability Talk)
- 60% of people with learning disabilities who are able to work would like a job yet only 6% of these are gainfully employed (source: MenCap, Diversify)
  - Papua New Guinea has more languages (840) than the whole of Europe combined = 12% of the world's total (7,117) (source: Visual Capitalist)



# Exhibit 1: Diversity & Inclusion in 10 Charts

Everything you wanted to know about D&I



Source: BofA Global Research, US Census Bureau, Pew Research, Refinitiv, World Bank, CFA Institute, Google Trends, WEF, Our World in Data, Diversity Labs, LexisNexis, LDC



## Executive Summary: all together now!

### Diversity is having a seat at the table, Inclusion is having a voice!

We believe Diversity & Inclusion (D&I) is leading the way to tackling the social issues of our time. From the #MeToo movement to #BlackLivesMatter, awareness of injustices faced by under-represented and marginalised groups is at an all-time high. However, there is so much to do. It will take 257 years to close the gender economic gap at today's rate. In 2020, there were no black senior executives in any of the FTSE 100 companies. 90% of children with disabilities in EM countries do not attend school. >75% of Nasdaq companies do not have at least 1 woman and 1 under-represented minority or LGBT+ member on the board.

In this report we highlight the top points to consider for diversity and inclusion. Moreover, we believe COVID (flexible WFH arrangements, childcare support), Gen Z (hashtag activism, clicktivists) and ESG assets (US\$20tn over the next 20Y) could be catalysts to boost diversity & inclusion.

### Not doing the right thing has cost us \$70tn since 1990

Not closing the inequality gap and a lack of D&I has an economic price tag. Gender and racial biases lead to persistent labour market disparities and limit the economy. For example, closing gender and race gaps in education and employment would have generated US\$2.6tn more in economic output in 2019 and the cumulative gains from 1990 would have been c.US\$70tn in 2019 dollars, all else equal. Furthermore, closing the racial earnings gap resulting from disparities in health, education, incarceration and employment opportunities would boost trend growth by 0.5%pt per year through 2050.

However, if we harness D&I fully, society can build back better, fairer and richer post-COVID. Today in the US, there are already more kids from ethnic minority backgrounds than white peers, more Spanish speakers than in Spain, while globally women are accumulating financial assets 1.5x faster than men. Full gender equality globally would increase world GDP by up to US\$28tn by 2025.

Globally, the loss of human capital wealth due to gender inequality alone is estimated at US\$160.2tn – World Bank

### Gender diversity suffers setback year: COVID hit to women's jobs=\$1tn by 2030

The COVID crisis has deepened gender inequality. 96mn people will slide into extreme poverty in 2021, of which 47mn will be women. Women's jobs were 19% more at risk and women took up an even greater share of childcare and unpaid labour during the pandemic. Even before COVID, the gender gap was worsening – it will take 257 years to reach economic equality.

The question remains as to whether positive lessons will be learnt and adopted longer term from the pandemic, such as greater value associated with care labour or more flexible working provisions that could aid economic empowerment for women who take on an more care and unpaid labour.

Despite the challenging outlook for gender equality, there are bright spots. Women have dominated in the vaccine discovery industry this year– the mRNA approach in the Pfizer/BioNTech vaccine was pioneered by Katalin Karikó and Nita Patel is Novavax's main researcher who leads an all-women team. Meanwhile, female-led countries, such as Germany, Norway, Denmark, Taiwan, Finland, Iceland and New Zealand seem to have managed the pandemic crisis better than their male counterparts. Indeed, countries led by women have done better in terms of total deaths per million and total COVID cases.



### **Hispanic: US Latino economy = 8<sup>th</sup> largest economy in 2018**

By 2045, the US will be minority white, excluding Hispanic/Latino Americans, vs 59.7% in 2020. The Hispanic population will grow the most over the next four decades expanding from 18.7% in 2020 to 27.5% by 2060. This cohort will be a key economic force, already the 8<sup>th</sup> largest global economy, having averaged 2.8ppt higher labor force participation than the US population with a million Latinos reaching adulthood each year for the next 2 decades. This economy grew 72% faster than the non-Latino US GDP for 2010-2018, aided by a constantly higher entrepreneurial rate than other US groups. However, the group is still limited by a lack of inclusion, with 12.2% unbanked vs 2.5% of white Americans, less political representation and consistently lower median incomes.

### **Lack of African Americans on boards**

The US National Urban League's Equality Index estimates that African Americans are missing out on 43.5% of the economic pie and Hispanics on 37.9%. But the inequities felt go beyond economic. The infant mortality rate for Black Americans is 2x that of White Americans, while incarceration rates are 5.6x higher and 47% of black families are underserved by banks or unbanked. Stakeholders, management, and companies must also do better. There are now only 3 black chief executives in the Fortune 500 and no black senior executives in the FTSE 100. 30% of 1 mn discrimination complaints filed with the US Equal Employment Office Commission are related to racial discrimination.

### **LGBTQ+: major reforms over past 30Y, but still criminalised in 1/3 countries**

If LGBTQ+ were a nation, it would be the 4<sup>th</sup> largest economy in the world at US\$3.9tn. Further, LGBT rights have transformed in the past 30 years: 1990 saw the UN declassify homosexuality as a mental disorder, 46 countries have decriminalised homosexuality since 1990, 28 countries have legalised gay marriage as of 2020 and in 2019 the WHO declassified identifying as transgender as a "mental disorder". However, discrimination and exclusion still occur. 15 countries allow for death penalties or life imprisonment for homosexuality and a further 49 countries have prison sentences. Only 81 countries have some form of employment protection. Positively though, LGBTQ+ acceptance in the US is at record levels aided by growing openness and gender fluidity in younger generations.

### **Disabilities: affects 1/7 people, c50% in US adults experience mental illness**

Disability is much more prevalent than one might think – 1 in 7 individuals globally has a disability and 2% of working age people become disabled each year. Consequently, a quarter of the global population is directly or indirectly affected by a disability. Further, mental health illnesses continue to go unnoticed, particularly in work settings. Nearly half of US adults will experience a mental illness during their lifetime but only 60% will report their health concern to their company. Mental health is only likely to grow in importance as Gen Z sees growing mental health issues.

### **ESG Matters: doing good means doing well, diverse companies enjoy better ROE**

More diverse & inclusive companies make for better investment results. We see empirical evidence that companies with superior scores on workforce and board diversity experience higher ROEs and lower earnings risk than lower-ranked peers. Moreover, gender diversity-focused funds have generated higher risk-adjusted returns than the global equity benchmark over the past 5 years. Our ESG team found that:

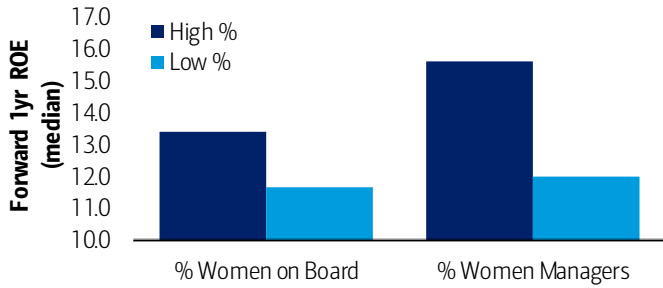
- S&P 500 companies with more than 33% people of color (PoC) employees have enjoyed >1ppt higher ROE than their peers in the subsequent year on average;
- companies with above-average ethnic and racial diversity in the workforce see 8% higher ROE one year out compared with less diverse peers;
- Companies with above-median women in management see 30% higher ROE and 30% lower earnings risk over the next year vs. those with below-median; and



- Companies with above-median board gender diversity see 15% higher ROE and 50% lower earnings risk one year out compared with their less diverse peers.

**Exhibit 2: Gender diversity correlates with higher future ROE**

Median forward 1yr ROE for % women on board & managers (2005-20)



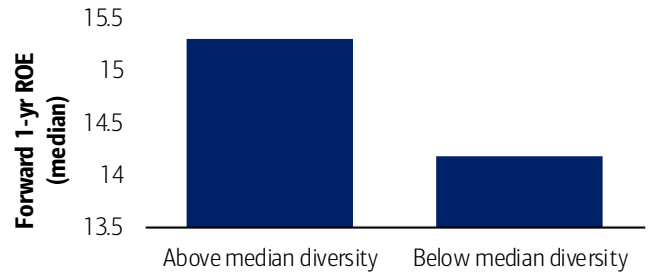
\*Data from 2010 on for % Women Managers Note: High (Low) % of Women on Board defined as above (below) the universe median; High (Low) % of Women Managers: above (below) 30%

Source: Refinitiv, BofA US Equity & Quant Strategy

BofA GLOBAL RESEARCH

**Exhibit 3: More ethnic & racial workforce diversity = higher ROE**

Median forward 1-yr ROE based on the % of people of color in the workforce for S&P 500 companies (2008-20)



Source: Revelio Labs, BofA US Equity & Quant Strategy Note: People of color is defined as Black, Hispanic, and Asian.

BofA GLOBAL RESEARCH



# Economics of D&I: reaching full potential

**Joseph Song**  
US Economist  
BofAS

**Michelle Meyer**  
US Economist  
BofAS

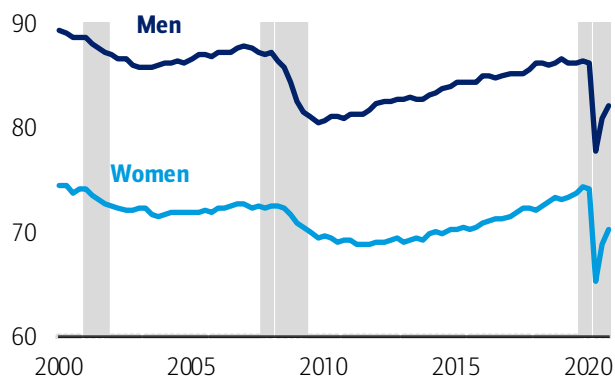
A lack of diversity and inclusion can lead to significant economic losses. Gender and racial biases lead to persistent labor market disparities in outcome and keep the economy from reaching its full potential. Recent work by San Francisco Fed President Mary Daly and her colleagues show that closing the gender and race gaps in education and employment would have generated US\$2.6tn more in economic output in 2019 and the cumulative gains starting in 1990 would have been close to US\$70tn in 2019 dollars, all else equal<sup>1</sup>. Another study finds that closing the racial earnings gap resulting from disparities in health, education, incarceration and employment opportunities would boost trend growth by half a percent per year through 2050.<sup>2</sup> In our view these estimates are likely to be an upper bound as they don't take into account potential feedback loops (e.g. lower equilibrium wages due to higher labor supply and fewer distortions) or transition costs. Still, these estimates show that the cost of inequality is high.

## 600bn+ reasons to promote labor market equality

There are large gaps in the rate of employment by gender and race. After making strong progress during the women's rights movement in the 1970s and 1980s, the US labor market still sees gender employment gaps today. The employment population ratio of prime age (25-54) women has been on average 14ppt lower than that of men since 2000 (Exhibit 4). We find persistent gaps by race as well: prime age Blacks have about a 7ppt lower employment population ratio than prime age Whites while Hispanics and Asians employment levels are 5ppt and 3ppt lower, respectively (Exhibit 5).

### Exhibit 4: Prime age (25-54) employment population ratio by gender

Since 2000, women's employment population ratio is about 14ppt lower than men

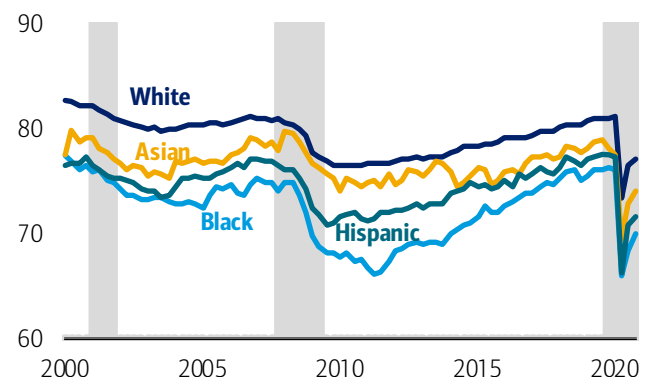


Source: Bureau of Labor Statistics

BofA GLOBAL RESEARCH

### Exhibit 5: Prime age (25-54) employment population ratio by race

Since 2000, the Black employment population ratio is about 7ppt lower, Hispanics about 5ppt lower and Asians about 3ppt than Whites



Source: Bureau of Labor Statistics  
BofA GLOBAL RESEARCH

How much could we gain from closing the employment gap? We estimate that if prime-age women had the same employment rate as men, it would generate an additional US\$600bn in labor compensation (wages + benefits) per year (or ~3% of GDP) assuming workers earned the current average wage and benefits. A similar exercise shows closing the race employment gap would provide an additional US\$150bn in labor compensation per year (~1% of GDP). Since 2000, closing the gender and race employment gaps would have respectively generated an additional US\$10tn and US\$2.8tn in wages and benefits.

<sup>1</sup> Daly et. al. "The Economic Gains from Equity", Uneven Outcomes in the Labor Market Conference, Atlanta Fed, February 1 2021.

<sup>2</sup> Turner, Ani. "The Business Case for Racial Equity: A Strategy for Growth". W.K. Kellogg Foundation – Altarum, 2018.





These estimates are a simple illustration of the cost of the employment gap alone. Costs are likely to be greater if we consider gaps in wages and employment opportunities due to gender and racial biases, which we discuss below.

## Inequality across different margins

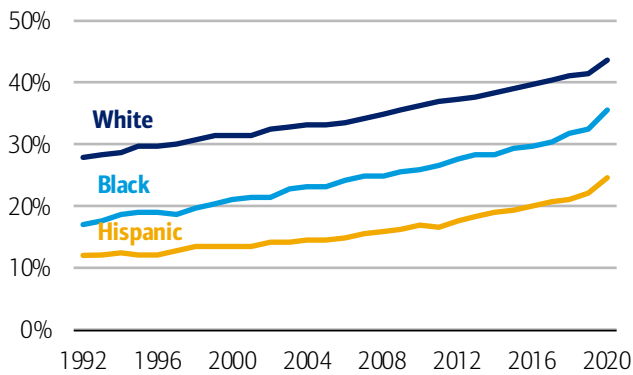
Inequality exists across various margins in the labor market and appears to have a profound impact on labor market outcomes for individuals. Below we present some of the persistent disparities in labor market outcomes by gender and race in the US.

### Education

Non-whites are less likely to have a college education than their White counterparts (Exhibit 6). This has clearly contributed to socio-economic inequalities as college educated workers are likely to earn 82% more than a high school graduate (Exhibit 7). There are also inequalities in employment opportunities within education groups. That is, women and non-whites are likely to have lower returns on education than men and Whites. For example, Daly et. al. find that eliminating the gaps in returns on measured skills, utilisation, and occupation-industry allocation would have boosted output by US\$940bn in 2019. These inequalities in returns could lead to further under-investment in human capital, lowering the potential of the economy, in our view.

#### Exhibit 6: Share of employed with college education or above by race

Non-whites continue to lag Whites in education attainment

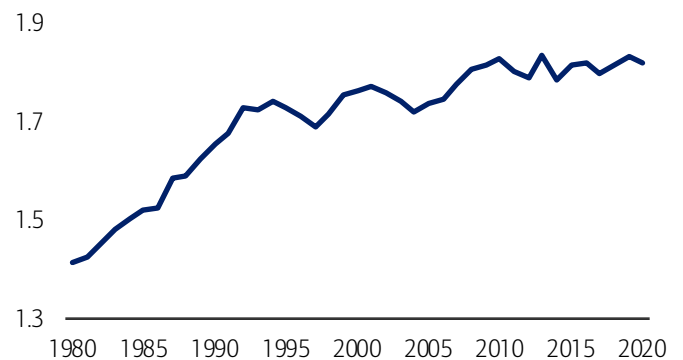


Source: Bureau of Labor Statistics

BofA GLOBAL RESEARCH

#### Exhibit 7: College wage premium

Ratio of median usual weekly earnings of college graduates and median usual weekly earnings of high school graduates



Source: Bureau of Labor Statistics

BofA GLOBAL RESEARCH

### Employment outcomes

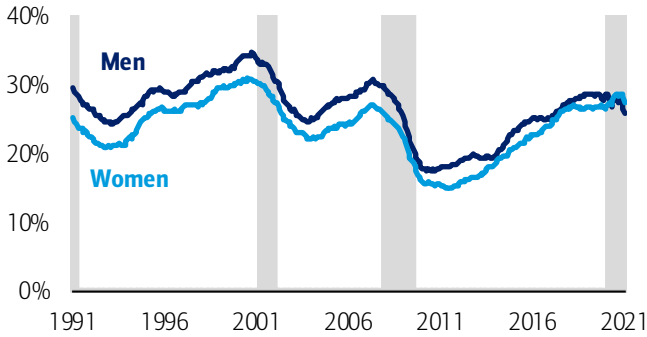
There are meaningful disparities in employment outcomes by gender and race. Women generally have a lower job finding rate (share of unemployed workers finding jobs) than men (Exhibit 8). Moreover, women are more likely to lose or leave their jobs than men, suggesting they are less secure in their jobs and the labor force (Exhibit 9). There are similar disparities across races. Black workers have a lower job finding rate than White peers, though Hispanic workers have a similar rate to White peers (Exhibit 10). Meanwhile, Black and Hispanic workers have a higher job separation rate than White workers.

Different employment outcomes can have significant impact on individual workers. Longer spells of unemployment can have a long-run negative impact on wages. One study by the BLS found that workers' hourly wages were 9% lower than in the five years after a spell of unemployment<sup>3</sup>. Consequently more frequent spells of non-employment are likely to lower lifetime earnings potential. Therefore, workers that are less attached to the labor force could experience lower earnings over time, all else equal.

<sup>3</sup> Donna S. Rothstein, "An analysis of long-term unemployment," Monthly Labor Review, U.S. Bureau of Labor Statistics, July 2016

**Exhibit 8: Job finding rate by gender (% , 12 month moving average)**

Share of unemployed workers finding jobs

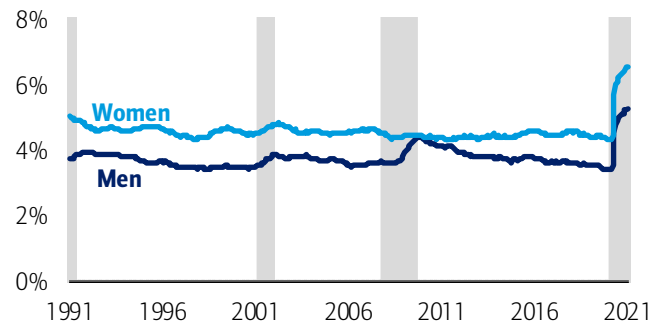


Source: Bureau of Labor Statistics

BofA GLOBAL RESEARCH

**Exhibit 9: Job separation rate by gender (% , 12 month moving average)**

Share of employed workers losing their jobs

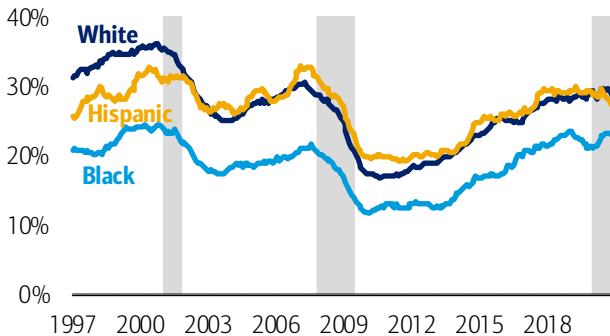


Source: Bureau of Labor Statistics

BofA GLOBAL RESEARCH

**Exhibit 10: Job finding rate by race (% , 12 month moving average)**

Share of unemployed workers finding jobs

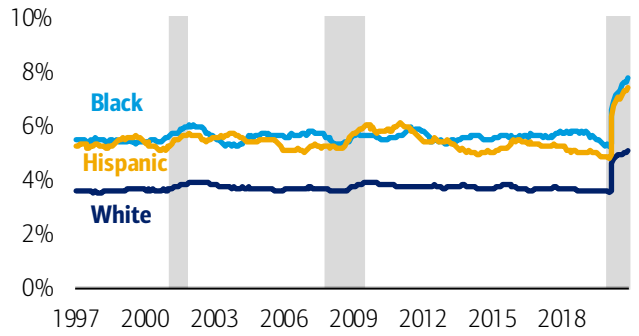


Source: Bureau of Labor Statistics, author's calculation based on CPS extract

BofA GLOBAL RESEARCH

**Exhibit 11: Job separation rate by race (% , 12 month moving average)**

Share of employed workers losing their jobs



Source: Bureau of Labor Statistics, author's calculation based on CPS extract

BofA GLOBAL RESEARCH

**Cost of recessions**

The negative impact from recessions is felt disproportionately by non-white workers. In the 6 recessions since 1973, Black and Hispanic workers experienced greater job losses adjusted for population and a higher unemployment rate and were more likely to leave the labor force during downturns than White workers (Exhibit 12). This has significant consequences for wages, as noted above, but studies also show workers that lose their jobs face a higher mortality rate. For example, Sullivan and von Wachter find that workers displaced at age 40 could see a 1-1.5-year lower life expectancy<sup>4</sup>.

**Exhibit 12: Average change in labor market indicators for the past 6 recessions since 1973**

Downturns have disproportionately hurt non-white workers during recessions as they experience greater job loss and higher unemployment rates and are more likely to leave the labour force

	Employment to Population Ratio	Unemployment Rate	Labor Force Participation Rate
<b>White</b>	-1.8	2.6	-0.1
<b>Black</b>	-3.3	4.3	-0.7
<b>Hispanic</b>	-2.8	3.8	-0.4

**Note:** We calculate the change in the labor market indicators from the quarter prior to the start of the recession to the quarter after the end of the recession then take the average of the changes. We use NBER's designation for recessions and expansions. We exclude Asians from this analysis as reliable time series is not available until 2003.

Source: Bureau of Labor Statistics

BofA GLOBAL RESEARCH

<sup>4</sup> Daniel Sullivan and Till von Wachter, "Job Displacement and Mortality: An Analysis using Administrative Data", The Quarterly Journal of Economics, Vol. 124, Issue 3, August 2009, Pg. 1265-1306.



# ESG Matters: want better results? Diversify!

**Savita Subramanian**  
Equity & Quant Strategist  
BofAS

**Marisa Sullivan, CFA**  
Equity & Quant Strategist  
BofAS

**Jill Carey Hall, CFA**  
Equity & Quant Strategist  
BofAS

## D&ID You Know? (source: BofA Research, Revelio Labs, ICE)

- S&P 500 companies with more than 33% people of color (PoC) employees have enjoyed >1 ppt higher ROE than their peers in the subsequent year, on average
- Companies with above-median women in management see 30% higher ROE and 30% lower earnings risk over the next year vs. those with below-median gender diversity
- Companies with above-median board gender diversity see 15% higher ROE and 50% lower earnings risk one year out compared with their less diverse peers
- Companies with above-average ethnic and racial diversity in the workforce see 8% higher ROE one year out compared with less diverse peers
- 71% of S&P 500 Utilities companies have Diversity and Discrimination Policies related to LGBTQ, more than the S&P 500 average of ~51%
- Only 11 companies in the S&P 500 have at least 50% female boards
- Only 8 companies in the S&P 500 have at least 50% female management teams
- One of six S&P 500 Financial companies have a workforce with PoC representation in line with or better than the US population average (40%)
- And only two companies in the S&P 500 have at least 40% PoC Boards

There is a new way to think about diversification in investments – via ethnic, racial and gender categories rather than stock, sector and asset class. We see empirical evidence that companies with superior scores on workforce and board diversity experience higher ROEs and lower earnings risk than lower-ranked peers. Moreover, gender diversity-focused funds have generated higher risk-adjusted returns than the global equity benchmark over the past five years.

## Gender diversity = higher ROE, lower EPS risk

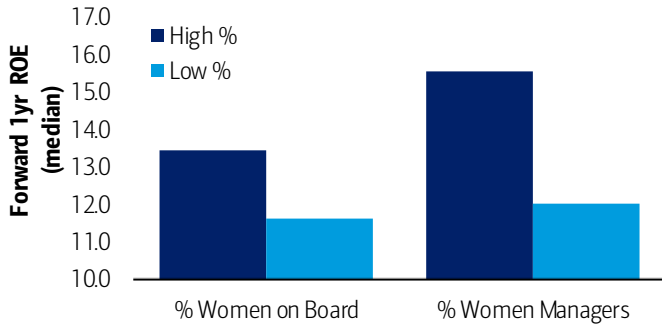
Gender diversity appears to lead to better operating results and lower risk. S&P 500 companies with at least 25% female executives saw consistently higher subsequent 1-yr median ROE since 2010. Although causation is difficult to establish, the past decade indicates that gender diversity has been correlated with superior future results.



Companies with at least 30% women in management positions have also seen a bigger median *improvement* in annual ROEs over this period. Board diversity was an effective signal of improving ROE in almost all sectors, the exceptions being Financials and Utilities. Why these two outliers? Perhaps due to the regulatory environment – Financials underwent a transformation from unregulated to regulated early on in the time series we analysed, and S&P 500 Utilities consist of mostly government-regulated companies.

**Exhibit 13: Gender diversity correlates with higher future ROE**

Median forward 1yr ROE based on % women on board and % women managers (2005-20)

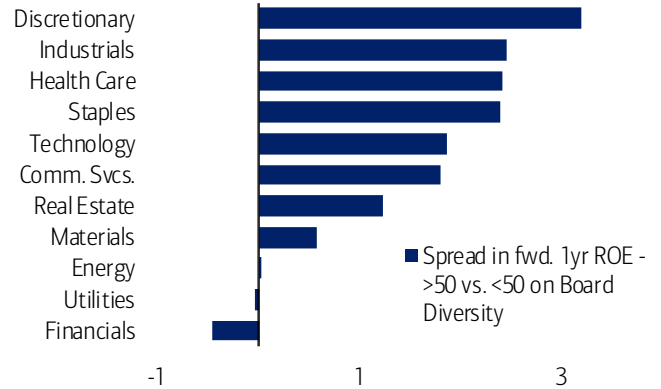


\*Data from 2010 on for % Women Managers  
 Note: High (Low) % of Women on Board defined as above (below) the universe median; High (Low) % of Women Managers defined as above (below) 30%  
 Source: Refinitiv, BofA US Equity & Quant Strategy

BofA GLOBAL RESEARCH

**Exhibit 14: Gender diversity correlates with improving future ROEs**

Median spread in 1yr forward ROE based on companies with >50 vs. <50 ranks on Board Diversity (2005-20)



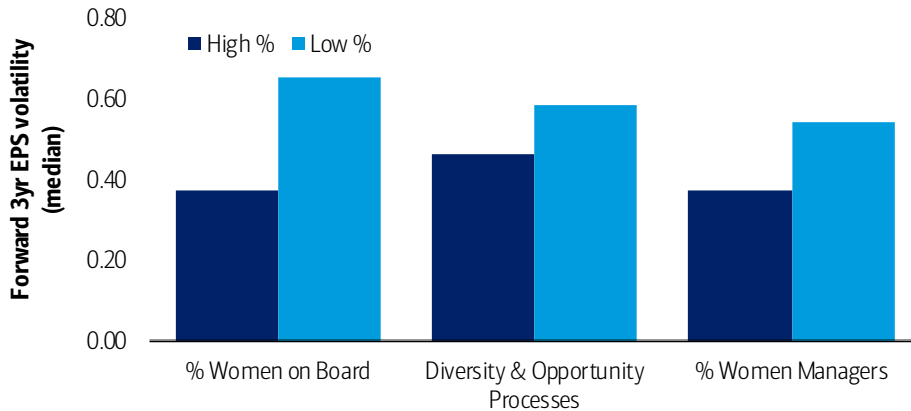
Based on BofA-covered US companies. See Appendix for full methodology.  
 Source: Refinitiv, BofA US Equity & Quant Strategy

BofA GLOBAL RESEARCH

Can gender diversity lower earnings risk? On all three relevant sub-pillar scores we analysed from Refinitiv (board diversity, company policies on diversity/inclusion, and women in management), companies with high ESG scores had lower earnings volatility than those with low ESG scores on these metrics.

**Exhibit 15: Gender diversity signalled lower earnings risk**

Median forward 3yr EPS volatility based on ESG scores (annually, 2005-16) for Board Diversity (Governance), Diversity & Opportunity Processes (Social), and % Women Managers (Social)



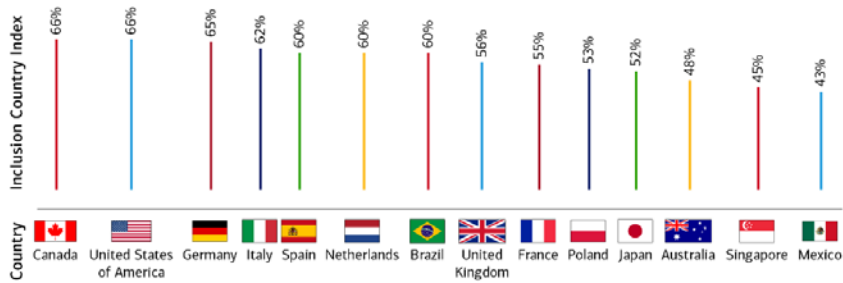
\*Data from 2010 on for % Women Managers  
 Note: High ESG Score based on >50 score on Board Diversity, Yes on Diversity and Opportunity Processes, and >30% women in management. Low ESG Score based on <50 score on Board Diversity, No on Diversity and Opportunity Processes and <30% women in management. Based on volatility in quarterly EPS over the subsequent three years.  
 Source: Refinitiv, BofA US Equity & Quant Strategy

BofA GLOBAL RESEARCH



**Exhibit 16: Inclusion Country Index**

Canada tops the Kantar Inclusion Index



Source: Kantar

BofA GLOBAL RESEARCH

## Diversity & Inclusion 101

*Diversity is being invited to the party. Inclusion is being asked to dance – Verna Myers, Netflix D&I*

*Diversity is having a seat at the table, Inclusion is having a voice – Liz Fosslien*

*Diversity in the modern world is more than just skin colour – it's gender, age, disability, sexual orientation, social background – and most important of all diversity of thought – Idris Elba*

*There's a dream, so rare yet so real. Every creed, every colour, once joined, never apart – World in Union, Rugby World Cup Official Theme Song*

*The most innovative company must also be the most diverse – Apple*

*Injustice anywhere is a threat to justice everywhere - Martin Luther King Jr*

*Men of quality respect women's equality – Jeremiah Say*

*For most of history, anonymous was a woman – Virginia Woolf*

*Hope will never be silent – Harvey Milk*

*Do we always have to know who's gay & straight? – Ellen DeGeneres*

### D&I 101: now a business imperative to take it seriously

While diversity and inclusion (D&I) has been recognised as a critical component of corporate culture for decades, it's only within the past few years that society has seen heightened awareness of the topic. Traditionally, diversity or sensitivity training programs have been seen as a *reactive* policy to negative behaviour. However, organisations are now starting to take a more *proactive* stance and prioritising diversity and inclusion as part of a more holistic strategy. This is not just because of changing demographics. There is now a workforce expectation and, more importantly, a *business imperative* to promote diversity and inclusion (Source: Deloitte)




By definition, diversity is the variety of people and ideas within a company, e.g. employing workers from a wide range of backgrounds. And inclusion is the creation of an environment in which people feel a sense of respect, belonging, safety, and authenticity, e.g. being able to voice their opinion. There is also a 3<sup>rd</sup> element to D&I which is 'equity', where the central tenet is equality of opportunity to prevent discrimination against people of different backgrounds, thus creating the acronym 'DEI'.

A range of factors however can pose a risk of exclusion, preferential treatment or discrimination, thereby preventing Diversity & Inclusion. These include age and generation; gender and gender expression; sexual orientation; mental and physical abilities; level of health; personality traits and behaviours; race, ethnicity and religion; language and nationality; location (such as rural and urban); social origin and parental background; poverty, income, education and socio-economic status; and appearance (Source: WEF).

**Exhibit 17: From Diversity to Equity to Inclusion**

The definitions of 'DEI'

**DIVERSITY, EQUITY & INCLUSION EXPLAINED**

<p><b>DIVERSITY</b></p>  <p>is the representation of various identities and differences</p>	<p><b>EQUITY</b></p>  <p>focuses on fair treatment, equal opportunity and equal access to resources</p>	<p><b>INCLUSION</b></p>  <p>is the active engagement of the contributions and participation of all people</p>
<p>DIVERSITY ASKS</p> <p><b>WHO</b> - IS IN - THE ROOM</p> <p>?</p>	<p>EQUITY ASKS</p> <p><b>WHO IS</b> - TRYING TO GET IN - THE ROOM BUT CAN'T</p> <p>?</p>	<p>INCLUSION ASKS</p> <p><b>- HAVE EVERYONE'S - IDEAS BEEN HEARD</b></p> <p>?</p>

Source: BofA Global Research, Diversity Labs

BofA GLOBAL RESEARCH

**Science: academic studies behind Diversity & Inclusion**

Research Affiliates point out the growing body of academic evidence that highlights the benefits of diversity on decision-making and innovation continues to build. The most reliable results come from the social sciences and behavioural economics fields that can isolate the specific elements of how humans interact and make decisions. In these studies, researchers show that randomly selected groups of people perform better than the single most-intelligent person (as measured by intelligence quotient or IQ). In fact, such randomly selected groups outperform collectives of highly intelligent individuals, including experts, when the latter do not interact with each other to solve problems.

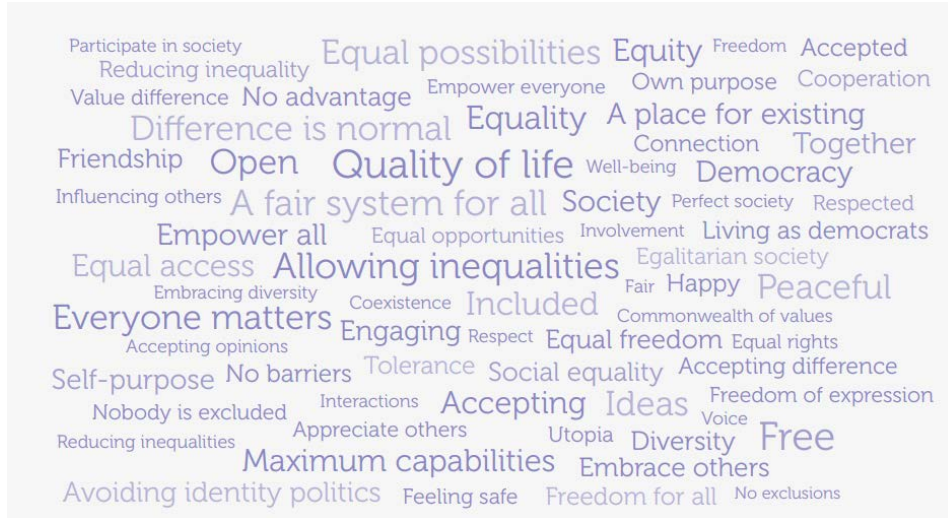
In many ways, the benefits of diversity in decision-making are analogous to the benefits of diversification in investment strategies. Two people, whose views are not perfectly correlated, will consider more (and different) facts and perspectives than either one would on their own. Assuming mutual respect and curiosity, their dialogue should lead to a more comprehensive assessment than would otherwise be the case. For instance, consider the number of times a reader finds typos in another's document when that



person could not see the obvious after having spent hours with the material. Adding more points of view, if different from the existing perspectives (that is, less than perfectly correlated), can continue to improve decision-making, up to the point of diminishing returns when the “cost” of including another person in the deliberations outweighs the benefit of adding another point of view (Source: Research Affiliates).

### Exhibit 18: What does the term “living in an inclusive society” mean to you?

Word cloud for the term ‘inclusion’



Source: Emerald Publishing

BofA GLOBAL RESEARCH

### Investment case on D&I

According to Research Affiliates, academic research and anecdotal experience indicate that the *business* case for corporate diversity is compelling as a result of higher collective intelligence. However, testing the *investment* case for greater diversity faces 2 major challenges: insufficient historical data and difficulty in measuring whether the culture is one that embraces dissenting views among the team.

To achieve better *corporate* outcomes (distinct from better *investment* outcomes), a firm needs both cognitive diversity among its ranks *and* a culture that embraces dissent, candour, and respect for other viewpoints i.e. an inclusive culture that is open to all sorts of different opinions rather than *groupthink*.

Empirical studies of the impact of board diversity on firm performance show mixed results. Several researchers, such as Singh et al (2001), Nguyen & Faff (2007), Campbell & Minguez-Vera (2010), and Hunt et al (2015), have found that firms with greater female board representation tend to be more profitable and/or to elicit positive stock market reactions. Others, such as Bohren & Strom (2010) and Darmadi (2011), have found that greater board diversity tends to be associated with lower accounting performance and to be less attractive to investors.

Much of the variability in results may be caused by factors distinct from the gender attributes of corporate boards. For instance, the literature reveals that female board members tend to have more limited business backgrounds and less CEO experience, and be younger and more likely hold advanced degrees, meaning it is difficult to make direct comparisons (e.g., Carter et al., 2010, and Hillman et al 2002). Ahern & Dittmar (2012), for example, show that the resulting negative impact on firm value from the Norwegian mandate on gender representation could be explained by younger ages and less managerial work experience, rather than the gender of the new board members.

Post & Byron (2015) reconcile many of the conflicting findings by addressing a crucial shortcoming in the existing literature, namely that the external environment matters to the results. They find that a positive link between board diversity and firm performance

exists in countries which exhibit stronger shareholder protections and greater gender diversity, while the opposite tends to be true in countries with weaker shareholder protections and lower gender parity. In other words, firm culture matters in deriving the benefits of diversity (Source: Research Affiliates)

Furthermore a study by sociologist Cedric Herring from the University of Illinois, Chicago, found that companies with the highest racial diversity were able to generate nearly 15x more sales revenue than firms with the lowest levels of racial diversity. Herring suggests that racial diversity is the most important predictor of a company's competitive positioning, and a better indicator of sales revenue and customer attainment than a company's size, years in business, and overall employee headcount. Diversity has also been linked to increased innovation potential. Studies show that diversity supports enhanced creativity, more informed decision-making, increased capacity for innovation, improved customer acquisition, stronger revenue-generating potential, and better talent management. (Source: S&P Global Ratings)

**Exhibit 19: Academic Survey Participants responses on different areas of Inclusivity**

Majority respondents agree that inclusive society promotes different ways of thinking and creates an open learning culture



Source: Emerald Publishing

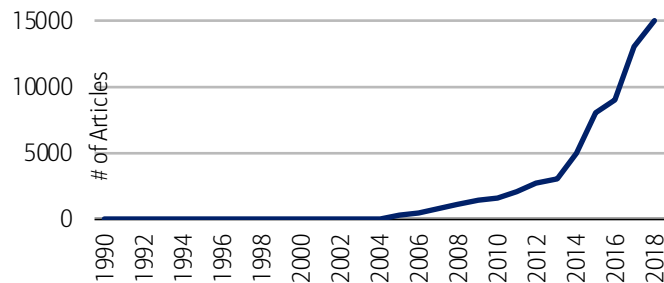
BofA GLOBAL RESEARCH

**From Science to Conscience: public demanding more Diversity & Inclusion**

Regardless of the academic studies, the past few years have seen a significant shift in the public mood and understanding on Diversity & Inclusion. From the #MeToo movement to the re-emergence of #BlackLivesMatter as the biggest civil rights movement in a generation, awareness of the injustices faced by under-represented and marginalised groups is at an all-time high. We believe the increasing shift in focus from the E(nvironmental) to S(ocial) factors within ESG investing post-COVID will accelerate this trend as people push the envelope on these issues.

**Exhibit 20: Number of News Articles mentioning 'Diversity and Inclusion'**

Number has consistently increased since 2004

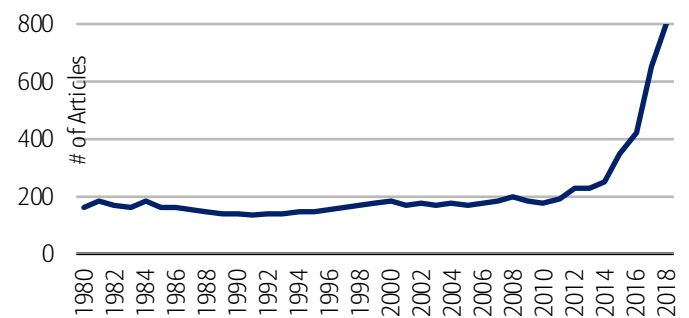


Source: LexisNexis, NYT

BofA GLOBAL RESEARCH

**Exhibit 21: Number of News Articles mentioning 'Social Justice'**

Number has drastically increased since 2014



Source: LexisNexis, NYT

BofA GLOBAL RESEARCH





# Disclosures

## Important Disclosures

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

## Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for the purpose of any recommendation in relation to: (i) an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report; or (ii) a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

BofA Global Research policies relating to conflicts of interest are described at <https://rsch.baml.com/coi>

**"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.**

### Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF); BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSCF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Indonesia): PT Merrill Lynch Sekuritas Indonesia, regulated by Otoritas Jasa Keuangan (OJK); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (Russia): OOO Merrill Lynch Securities, Moscow, regulated by the Central Bank of the Russian Federation; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V., regulated by Comisión Nacional del Mercado De Valores; Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSCF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please use this link <http://www.bankofamerica.com/emaildisclaimer> for further information

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information.

### General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.



Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Securities entities located outside of the United Kingdom.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS 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.

#### Copyright and General Information:

Copyright 2021 Bank of America Corporation. All rights reserved. iQprofile<sup>SM</sup>, iQmethod<sup>SM</sup> are service marks of Bank of America Corporation. iQdatabase<sup>®</sup> is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

