PAPERS

Pennsylvania Association of Public Employee Retirement Systems

PO Box 61543, Harrisburg, PA 17106-1543

Website: ***www.pa-pers.org***

Summer 2020

In This Issue

The previously announced 2020 Fall Workshop in Philadelphia is replaced by the rescheduled Forum.

Next year's Forum will be held in Harrisburg, May 25-26, 2021.

The 2021 Fall Workshop will be held in Philadelphia, dates to be confirmed.

Rescheduled Dates

16th annual PAPERS Forum

November 17-18, 2020

(Tuesday-Wednesday)

Hilton Hotel, Downtown Harrisburg

A 2020 PAPERS membership (Participating, Associate, Affiliate or Sustaining) for your pension plan or firm is required for your representative(s) to participate in PAPERS' two annual conferences.

Corporate sponsorships for the Forum are still being accepted from PAPERS' Associate and Affiliate Members.

Contact PAPERS Director of Operations Doug Bonsall (717-921-1957 OR douglas.b@verizon.net) for details about becoming a sponsor.

Check the PAPERS website *www.pa-pers.org* for:

- **Preliminary Forum agenda**
- **Driving directions and hotel registration details**
  Early-bird discounted rate available on/before 10/17/2020.
- **Conference registration form**
  Early bird registration rates available on/before 10/17/2020

Updates and more details will be printed in the fall 2020 issue of this newsletter, tentatively scheduled for distribution in mid-September. Until then, check the PAPERS website for the latest information.

From the Desk of PAPERS' Executive Director

I hope you enjoy this issue of PAPERS newsletter. We're happy to be able to provide interesting, diverse and timely articles to keep you informed of public pension issues. Although we were unable to conduct our annual forum in May, we are happy publish our newsletter which reaches about 1200 people.

We are beginning a series of webinars that will complement the newsletters. If you are interested in providing an article for the newsletter or conduct a webinar, or if you have an idea or a topic you think we should be addressing, please contact me at kdeklinski@msn.com or 717-979-5788.

We are setting up sponsorship opportunities to help us make up for the revenue loss of the spring conference. We've had such terrific support and interest from all our members. Thank you for keeping in touch and thanks for your feedback.

Warmly,

Karen Deklinski

PAPERS Executive Director
kdeklinski@msn.com; 717-979-5788

Become a PAPERS Member

For details about **Participating, Associate, Affiliate** and **Sustaining Memberships**, check the membership section of the PAPERS website **www.pa-pers.org** or contact:

PAPERS, PO Box 61543
Harrisburg, PA 17106-1543

Douglas A. Bonsall
Phone: 717-921-1957
E-mail: douglas.b@verizon.net

PAPERS Certified PA Public Retirement Plan Professional

Course Design

The certification program provides participants with exposure to a diverse and comprehensive curriculum of pension topics in a three-part process:

- **On-line introductory education modules develop by Fi360, Inc.**
    - *The Role of the Retirement Plan Fiduciary*
    - *Creating a Comprehensive Fiduciary Process – Parts 1 & 2*
- **Attendance at PAPERS conferences**
- **Continuing Education** – additional on-line education modules; on-line library resources

Program Enrollment

Please visit the PAPERS website www.pa-pers.org to access the certification program application form. A link to this printable form may be found on the "Certification Program" page.

Submit the completed form either by mail or e-mail. See details below under "Program Cost" for more information about submitting the application and required payment.

Program Cost

The one-time enrollment fee of $499 is payable by three methods:

1. ***To pay by check.*** Please make check payable to: **PAPERS** and return with application to: **PAPERS, P.O. Box 61543, Harrisburg, PA 17106-1543**
2. ***To pay by credit card or PayPal.*** Please access the PAPERS website www.pa-pers.org and click on "Certification Program". Near the bottom of this page click on the drop down box and follow the directions to pay the registration fee. If a completed application has not already been submitted, please do so either by mail to: ***PAPERS, PO Box 61543, Harrisburg, PA 17106-1543*** or scanned, saved and e-mailed to: ***douglas.b@verizon.net***.
3. ***To pay by ACH transfer.*** Please contact PAPERS by e-mail douglas.b@verizon.net to request the bank account and routing information you'll need to pay by this method. If you require a signed form to initiate the ACH transaction, please send the form to this e-mail address and it will be completed/returned promptly. Then, submit your completed membership application as note in #2 above so it can be matched with the ACH payment.

Process

After submitting a course enrollment form and payment of the one-time fee, individuals will receive an authorization code giving access to the on-line modules. Modules may be taken at one's leisure to be completed within six months of enrollment.

At the conclusion of each module, participants will take an on-line test to check their understanding of the material. The test may be re-taken any number of times until a passing grade is received.

Participants will receive written notification upon successful completion of the three on-line modules. The next step in the certification process is attendance at three of the next four PAPERS conferences (held each spring and fall). After attending the required number of conferences, participants will be awarded the *Certified PA Public Retirement Plan Professional* designation. Public recognition of this achievement will be provided at PAPERS conferences, on the website and in newsletters.

Continuing education will be required to maintain this designation.

PAPERS Application Form

Certified Pennsylvania Public Retirement Plan Professional

Participant Information:

Name: ____ Date: _____________

(Please **print** your name the way you would like it on your final certification)

Organization: ____

Address: ____

City: _______________________________________ State: _________ Zip: ____________

Telephone: _______________________ E-Mail: __________________________________

Payment Information:

The one-time registration fee is $499. Please fill out the following only if different than above:

Billing Name: ____

Billing Address: ____

City: __________________________________ State: _________ Zip: _______________

Payment methods:

1. ***To pay by check.*** Please make check payable to: **PAPERS** and return with this application to: **PAPERS, P.O. Box 61543, Harrisburg, PA 17106-1543**
2. ***To pay by credit card or PayPal.*** *(this function available after 6/1/2018)* Please access the PAPERS website www.pa-pers.org and click on "Certification Program". Near the bottom of this page click on the drop down box and follow the directions to pay the registration fee. If a completed application has not already been submitted, please do so either by mail to: ***PAPERS, PO Box 61543, Harrisburg, PA 17106-1543*** or scanned, saved and e-mailed to: ***douglas.b@verizon.net***.
3. ***To pay by ACH transfer.*** Please contact PAPERS by e-mail douglas.b@verizon.net to request the bank account and routing information you'll need to pay by this method. If you require a signed form to initiate the ACH transaction, please send the form to this e-mail address and it will be completed/returned promptly. Then, submit your completed membership application as note in #2 above so it can be matched with the ACH payment.

Please submit this completed application and payment to:

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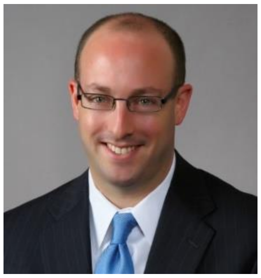
The Opportunity in Small and Microcap Equity

By: David Corris, BMO Asset Management



David Corris, CFA® heads the BMO Disciplined Equity Team and is responsible for equity portfolio management and research. He holds an M.B.A. from Harvard Business School and a B.S. in mathematics and quantitative economics from the University of Wisconsin. In addition, he is a CFA® charterholder and a member of the CFA Institute, the CFA Society of Chicago and the Chicago Quantitative Alliance.

The ten-year bull market in US equities ended abruptly in February 2020 as investors started to appreciate the health care, economic, and financial implications of COVID-19. In one of the sharpest selloffs on record, US large cap (measured by the Russell 1000 Index) experienced a peak-to-trough decline of approximately 35%, while US small cap (measured by the Russell 2000 Index) experienced a greater decline of over 40%. As of this writing, investors are grappling with questions including:

- Health care: when and how will the COVID-19 ultimately be contained?
- Economic: how long and deep will the recession be, and how quickly will the economy rebound?
- Financial markets: how low will US equity markets fall and when will we find a sustainable bottom?

With that said, long-term investors are starting to ask another question: Given the magnitude of the decline so far, and the historical pattern that markets typically bottom before the economy recovers, when and how should investors be positioning for the eventual rebound?

While no one can answer the timing question right now, in this article we present evidence for long-term investors that suggests:

- Small and microcap stocks have typically outperformed in significant market rebounds
- Small and microcap valuations are close to the troughs realized in the Great Financial Crisis of 2008-09

In our view, this creates a compelling opportunity for long-term investors who are willing to endure near-term volatility for higher long-term expected returns.

Small and microcap stocks have typically led in market rebounds

Following prior drawdowns, small cap and microcap have been very attractive during the subsequent economic rebound. While this has been generally true in market recoveries, given the extent of the 2020 drawdown, we focused our analysis on the most significant corrections in the past twenty years: 2001-2002[1] (Internet bubble), 2008-2009 (Financial Crisis), and 2015-2016.

The key observation: In each of these recoveries, we note that microcap has led small cap, which has in turn led large cap. Moreover, the cumulative returns are similar, reinforcing that given the relative underperformance of small cap to date, we would expect it to outperform from here through the recovery.

Internet Bubble

Index	**Period leading to trough: 07/01/2001 through 10/11/2002**	**Period recovering from trough: 10/11/2002 through 05/30/2003**
Russell 1000® Index	*-24.6%*	*22.1%*
Russell 2000® Index	*-25.6%*	*32.4%*
Russell Microcap® Index	*-23.5%*	*39.2%*

(Continued on Page 6)

The Opportunity in Small and Microcap Equity

(Continued from Page 5)

Small and microcap valuations are historically attractive

Current valuations within small cap and microcap are quite depressed, close to levels reached at the depth of the financial crisis. One caveat would be that forward estimates have mostly not been revised downward yet, whereas in 2009 economic conditions had already deteriorated for a few quarters, allowing analysts to make a better estimate of the negative impact on earnings. However, it's also not clear how long depressed earnings will last as that depends on the path of virus containment. Given uncertainty and lack of company guidance around earnings and duration, we think it's most appropriate to use normalized metrics (Price/Book, Price/Sales) as well as further-out estimates (FY2 rather than FY1). These metrics suggest small cap valuations are between those reached at the previous two troughs, and that microcap valuations are close to those observed at the bottom of the financial crisis.

Conclusion

We cannot predict the timing of how long this recession will last or when the market will bottom. To be clear, we must consider the possibility that markets have not yet bottomed. In previous cases, the market decline has lasted longer than the 1.5 months we've experienced thus far.

However, for a long-term investor looking out 12-18 months, we feel the above analysis represents the opportunity well. Small and microcap valuations appear close to approaching previous recessionary lows, and previous market rebounds have been led by small and microcap. Given the extent of the decline already experienced, with small significantly lagging large on the way down, we believe long-term investors are facing an above-average opportunity in US small and microcap equities.

Disclosures

[1] We start the Internet Bubble analysis in 7/2001 due to inception of Microcap Index.

The Russell Microcap® Index includes the smallest 1,000 securities in the small-cap Russell 2000® Index, plus the next smaller 1,000 securities.

Russell 2000® Index is an unmanaged index that measures the performance of the smallest 2000 U.S. companies in the Russell 3000® Index.

The Russell 1000® Index is a stock market index that represents the highest-ranking 1,000 stocks in the Russell 3000® Index.

Investments cannot be made in an index.

Views and opinions have been arrived at by BMO Global Asset Management. The information, estimates or forecasts provided were obtained from sources reasonably deemed to be reliable but are subject to change at any time.

This publication is prepared for general information only; it should not be construed as investment advice or relied upon in making an investment decision. Investment in the asset classes discussed is not suitable for every individual. All investments involve risk, including the loss of principal. Past performance is not a guarantee of future results.

Small-Cap and Micro-Cap stocks are less liquid and are more volatile than large-cap stocks.

The Price to Earnings Ratio (also called the PE ratio) is the primary valuation ratio used by most equity investors. It is a measure of the price paid for a share relative to the annual net income or profit earned by the firm per share. Forward price-to-earnings (P/E using FY1 & P/E using FY2) is a version of the ratio of price-to-earnings (P/E) that uses forecasted earnings for the P/E calculation. Future performance cannot be guaranteed.

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COVID-19: A New Chapter in ESG and Fixed Income?

By: Frances Barney, Head of BNY Mellon Global Risk Solutions, CFA

Frances Barney, CFA, *Head of Global Risk Solutions, BNY Mellon,* has over twenty years of investment industry experience, most of it in performance and risk analytics services. Prior to joining BNY Mellon in 2006, Frances worked at State Street Corporation, where she oversaw one of three regional offices supporting the delivery of performance analytics for its U.S. custody clients and managed the U.S. performance outsourcing service for investment managers and consultants. Prior to that, she worked at Deutsche Bank Trust Company Americas, where she was head of performance analytics. Frances started her career at Bankers Trust, where she held a variety of product and risk management roles in the global markets and investor services divisions. Frances received a B.A. from Yale University, an M.B.A. from The Wharton School of the University of Pennsylvania and is a Chartered Financial Analyst. Frances is an active volunteer with the CFA Institute for the Certificate in Investment Performance Measurement ("CIPM") program.

Historically, equities have been the focus of environmental, social and governance (ESG) integration. However, ESG considerations in fixed income have gained considerable traction in recent years, and could receive even more attention as the COVID-19 pandemic unfolds.

In a 2017 CFA Institute member survey, 76% of respondents said they used ESG analysis in listed equity selection. Fixed income came in second at 45%. That gap is narrowing as data to support ESG tracking and analysis in fixed income expands. Increasingly, large institutional investors seeking new sustainable investment opportunities have been turning to fixed income as the next area of focus for achieving their ESG portfolio objectives. COVID-19 could also accelerate that progression, as access to debt markets will be critical to cushioning the economic and societal impact of the disease.

The rapid expansion of the green bond market provides historical context for what the growth of a COVID-19 social bonds market might look like. About a decade ago, the World Bank launched its first green bond issuance in concert with Scandinavian pension demand for investments that also addressed climate change. According to a 2020 report by the Climate Bonds Initiative, global green bond and loan issuance hit a record high of $255 billion in 2019.

Since March, the International Finance Corporation and African Development Bank have raised a total of $4B in social bond issuance to support countries and businesses impacted by COVID-19. Supra-nationals, together with institutional investors, may well pave the way for the scaling of social bonds to meet the challenges of COVID-19 as they did with green bonds. The potential for impact is profound, as capital can be used to address supply chain gaps, development and scaling of vaccine treatment, infrastructure resiliency and economic and societal recovery in general.

Pre-COVID-19, approximately 35% of public sector plans incorporated ESG integration, screening and engagement into their processes. ESG opportunities generally require time to materialise and the expertise and resources to analyse. While ESG integration has gained momentum in fixed income, we are hearing that a greater body of research, better data and more consistent disclosure practices are needed to help investment staff identify ESG opportunities and risks. COVID-19 is an example of an unfortunate once-in-a-lifetime event that, hypothetically, might be better weathered by those issuers who have more robust ESG frameworks in place. In time, the data will either validate or disprove this hypothesis.

As a servicer of assets, BNY Mellon is developing tools to support ESG investor analysis. BNY Mellon has incorporated corporate fixed income data into our ESG Analytics capability, which allows institutional investors to

(Continued on Page 8)

COVID-19: A New Chapter in ESG and Fixed Income?

(Continued from Page 7)

score their equity and fixed income portfolios against ESG factors and other sustainability criteria. We see cross-industry collaboration as fundamental to laying the additional foundation needed to support investor interests and further maturity of ESG investment analysis.

Sources:

[1] Environmental, Social and Governance (ESG) Survey (https://www.cfainstitute.org/-/media/documents/survey/esg-survey-report-2017.ashx)

[2] (Climate Bonds Initiative, 2020) (https://www.climatebonds.net/2020/01/record-2019-gb-issuance-255bn-eu-largest-market-us-china-france-lead-top-20-national)

[3] Social Bonds in Response to the COVID-19 Crisis: a Guide for Issuers https://iclg.com/briefing/11388-social-bonds-in-response-to-the-covid-19-crisis-a-guide-for-issuers

[4] (Funds Europe, 2020) https://www.funds-europe.com/news/esg-rating-linked-to-outperformance-amidst-coronavirus-pandemic

[5] (IFC, Social Bonds, 2020) https://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/about+ifc_new/investor+relations/ir-products/socialbondsDisclaimer: https://www.bnymellon.com/us/en/disclaimers/business-disclaimers.jsp#as

Disclosure

The Do's and Don'ts of Releasing an RFP for Your Municipal Defined Benefit Pension Plan

By: Christopher Englebert

Founding Partner & CIO of Englebert Financial Advisers

Chris began his career in 1984 with E.F. Hutton, utilizing their institutional managed accounts program through the Consulting Group to place institutional and high net worth clients with professional money managers. He began working with Pennsylvania Municipal Defined Benefit Plans to help increase their investment returns and meet their actuarial assumptions with professional money managers.

In 1986, he became a founding member of APIC, the Association of Professional Investment Consultants, an organization made of E.F. Hutton consultants that wanted to bring the highest level of professional money manager consulting to their high net worth and institutional clients. During the 2008-2009 global financial crisis, Chris made numerous trips to Harrisburg to educate state legislature on the intricacies of defined benefit pension funds and beneficial changes that could be made to them. While maintaining and growing his high net worth client relationships, his experience evolved his business into focusing on Pennsylvania municipal finance. He advises on various facets of asset allocation, manager selection and index utilization. He has also introduced a new defined contribution format, utilizing active investment models for participants. Chris graduated from the University of Minnesota with a major in Agricultural Business and minor in Agricultural Economics. .

- When You Should Issue an RFP
- Reasons Why You Should Issue an RFP
- Who Do You Want to Respond to the RFP
- What to Do When You Get the Responses
- In Person Interviews, Are They Necessary?
- Funny RFP Stories

For the full research paper, check out:

https://www.fin-news.com/2020/04/29/the-dos-and-donts-of-releasing-an-rfp-for-your-municipal-defined-benefit-pension-plan/.

New Research Examines Impact of Market Decline on Public Pension Plans

Re-Printed from the Center for State and Local Government Excellence
Submitted by: Elaine Spilove, USB Financial Services

The Center for State and Local Government Excellence (SLGE) *helps local and state governments become knowledgeable and competitive employers so they can attract and retain a talented and committed workforce. SLGE identifies leading practices and conducts research on public retirement plans, health and wellness benefits, workforce demographics and skill set needs, and labor force development. SLGE brings state and local leaders together with respected researchers. Access all SLGE publications and sign up for its newsletter at slge.org and follow @4GovtExcellence on Twitter.*

WASHINGTON, D.C., May 12, 2020 – A new analysis of state and local public pension plans indicates th these retirement plans will end fiscal year 2020 with negative annual investment returns, reduced asset values, lower funded ratios and higher actuarial costs. Additionally, the research indicates that plan finances will continue to decline in the wake of the economic downturn.

These findings are contained in a new research brief from the Center for State and Local Government Excellence (SLGE) and the Boston College Center for Retirement Research (CRR), 2020 Update: Marke Decline Worsens the Outlook for Public Plans. The research is available here.

Table 1. *Projections of Key Financial Metrics for State and Local Pension Plans, FY 2020 and 2025*

Item	Fiscal Year		
	2020	2025	
		Faster recovery	Slower recovery
Funded ratio	69.5%	62.7%	55.5%
Actuarially required contribution rate	19.7%	25.1%	29.1%
Assets to benefits ratio	11.6	9.4	7.9
Ratio of net cash flows to assets	-2.8%	-3.8%	-4.5%
# of plans that have exhausted trust fund assets	0	0	0

Sources: Authors' estimates based on various plan financial reports and PPD (2001-2019).

(Continued on Page 10)

New Research Examines Impact of Market Decline

(Continued from Page 9)

The analysis indicates that on the whole, plans can endure and will maintain sufficient assets to pay benefits. However, some plans with extremely low funded ratios will face an increased risk of exhausting assets and high costs that are associated with pay-go funding.

This brief is part of ongoing research that tracks the fiscal health of public pensions across the US. This research and the accompanying appendices rely on the Public Plans Database (PPD) to report on the funded status of public pensions.

The research finds that:

- The ratio of assets to liabilities for public plans slipped from 71 percent in 2019 to 69.5 percent in 2020. As a result of this drop in the funded ratio, the average actuarially determined contribution is estimated to rise from 18.8 percent to 19.7 percent of payroll.

- With respect to plan finances projections from 2020-2025, the data show that the average funded ratio for public plans will steadily decline. But, even if markets do not fully recover until 2025, most plans will emerge with enough assets to pay benefits indefinitely.

- The lowest funded plans will remain solvent during the next five years, but a few are projected to exhaust their assets soon thereafter.

- Even the lowest funded plans can endure in the short term. But over the long term, all pension plans will be further behind.

The Center for State and Local Government Excellence gratefully acknowledges the financial support from ICMA-RC to undertake this research project and its support of the Public Plans Database.

Our EM Outlook in a Landscape Transformed by COVID-19

Submitted by: Nuveen Emerging Markets Debt Team

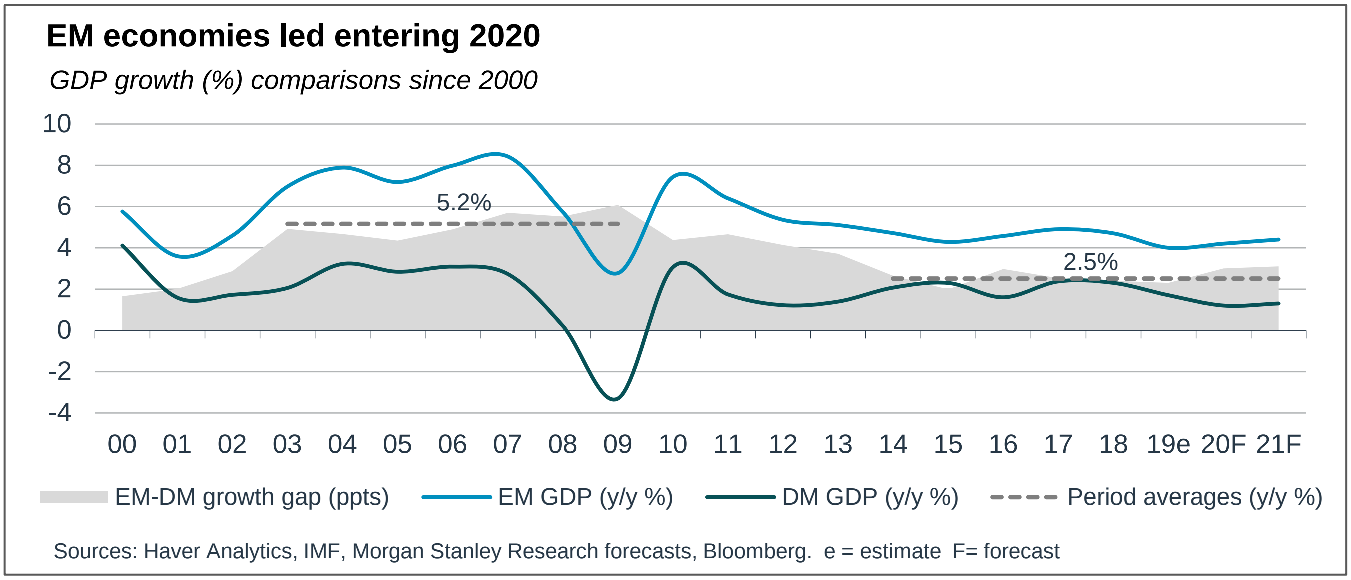
Emerging markets (EM) overall are still at an earlier stage of the coronavirus infection curve than their developed market (DM) counterparts. Considering the higher dependence of many EM economies on trade and commodities, coupled with their fragile health care systems and large “shadow” sectors, the disease-related shutdowns present significant political and economic challenges for EM policymakers. They will be forced to balance the impact of large hits to growth and fiscal accounts with public health and social repercussions. Consequently, we believe political risk will need to be closely watched heading into 2021, as voters digest their respective governments’ responses to the pandemic.

(Continued on Page 11)

Our EM Outlook in a Landscape Transformed by COVID-19

(Continued from Page 10)

For the broad EM sphere, the economic damage from COVID-19 might turn out to be relatively mild. If so, it will be largely because EM economies, in aggregate, had higher starting levels of GDP growth relative to DM countries heading into the year (see graph below).



In its April 2020 *World Economic Outlook*, the IMF projects developing-world GDP will contract by a relatively modest 1% this year (compared to a 6.1% decline for advanced economies), and then rebound 6.6% in 2021 (versus 4.5% growth for advanced economies). Our forecasts align with the IMF's, showing widely divergent outcomes among individual countries. Lower-income economies, and those with limited ability to enact fiscal stimulus, are bound to suffer the most.

Against that backdrop, we believe more stimulus —and economic reforms — will be necessary globally and at the individual country level to help economies return to pre-pandemic growth rates. Additional central bank swap lines will almost certainly be required. And China, as a major bilateral creditor, will need to take a major role in providing financial lifelines.

But higher levels of stimulus and lending bring added risks. We expect government and corporate repayment capacity to be weakened as economies generate lower levels of activity and tax revenue. Moreover, with theirbudgets now heavily skewed toward fighting the virus, governments may struggle to address issues other than health care. Further, support for quasi-sovereigns must become part of the solution, as many still represent a drain on government balance sheets.

Given the diversity of EM countries and issuers, the current crisis creates significant, unique opportunities, despite COVID-19's devastating human and economic toll. In fact, our core belief that EM debt should not be considered a monolithic asset class has never been more applicable.

Within the EM universe, we've identified sovereign issuers with sound policy frameworks and fiscal and monetary buffers healthy enough to tolerate near-term volatility, as well as companies with strong balance sheets and liquidity positions. If debt forgiveness and multilateral funding are available, sovereigns may be able to both withstand the crisis and meet existing obligations.

(Continued on Page 12)

Our EM Outlook in a Landscape Transformed by COVID-19

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Lastly, we've uncovered EM segments where we believe valuations have overshot and are inconsistent with fundamentals. Current market pricing implies a high rate of defaults that might not materialize, based on our analysis of default levels during prior crises.

Anupam Damani, CFA, leads Nuveen's 16-person Emerging Markets (EM) Debt Team, which manages over $12 billion in EM debt assets across sovereign, corporate and local-currency markets. Anupam and EM Debt team member Katherine Renfrew have been ranked among the top 20 female portfolio managers in the U.S. by Citywire Professional Buyer magazine.

Navigating Unchartered Territory:

The Importance of Maintaining a Long-Term View and Strategic Partnership

By: Katheryn O'Hara & Perry Giovannelli, PFM Asset Management LLC

Financial Markets in Review

In the first quarter of 2020, financial markets worldwide were blindsided by two significant events: the global spread of the novel coronavirus (COVID-19) and a steep drop in oil prices caused by a price war between Saudi Arabia and Russia. Markets witnessed extreme volatility that resulted in a roughly 30% collapse over the course of 22 days. The closest modern comparison was a 38 day tumble that began on August 25, 1987 and included the infamous "Black Monday." Otherwise, one would have to go back to the Great Depression, where three drawdowns of similar magnitude were witnessed over a five-year period.

While it may be difficult, if not impossible, to entirely insulate pension plans , OPEB Trusts, and other investment pools from such volatility, maintaining a long-term perspective as it relates to asset allocation and forging strategic partnerships are ways to potentially mitigate risk and better navigate the challenging financial landscape of today and uncertainty of tomorrow.

The Importance of Asset Allocation

As market and economic cycles fluctuate, these moving targets present challenges to public retirement plans across the Commonwealth as they try to meet annual cash flow requirements and their long-term assumed returns. As such, the role of asset allocation in building a well-diversified investment portfolio is paramount. Studies have shown that more than 90% of an investment portfolio's risk profile and ability to achieve return goals, is driven by asset allocation, with the balance impacted by manager selection. Despite the overwhelming impact that asset allocation has on future potential performance, many investment committees and boards allow manager selection to dominate meeting agendas. Institutional investors must implement an asset allocation that fits the distinct needs of their portfolios, while simultaneously considering cash flow expectations and investment policy guidelines. Partnering with an experienced advisor can help to add discipline and structure to the investment process and ensure that time and attention is paid to what ultimately matters.

Need for a Closer Partnership

In today's uncertain economic environment and increasingly complex market, institutional investors require a strategic partner to help prudently manage their assets. To meet this need, the use of

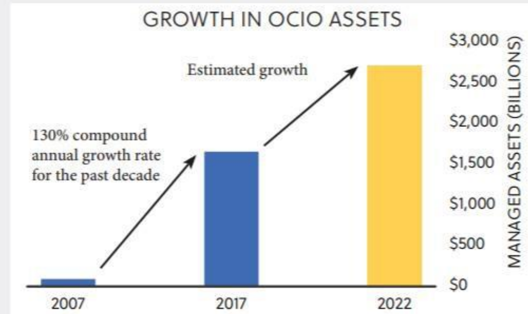
(Continued on Page 13)

Navigating Unchartered Territory

(Continued from Page 12)

AN OCIO IS...

- A strategic partner that assumes responsibility for risk management, performance, and implementation
- Ideal for investors that do not have the time or resources to be fully immersed in the markets or sufficiently research investment opportunities
- A way to become more nimble without sacrificing due diligence processes or requiring more time from decision-makers



Source: Pensions & Investments, Cerulli Associates, as cited in "Maximizing the OCIO Growth Opportunity," Chestnut Advisory Group, February 2018. http://www.chestnutadvisory.com/wp-content/uploads/2018/01/CAG_Maximizing_the_OCIO_Growth_Opportunity.pdf

discretionary investment services, also referred to as Outsourced Chief Investment Officer (OCIO) services, have become increasingly popular. An OCIO is a fiduciary responsible for allocating assets and selecting managers within the context of a mutually agreed upon investment policy and can be a valuable resource as they can enable quicker, more effective decision-making. As market complexity increases, the necessary due diligence to execute a prudent investment strategy also increases, and few plan sponsors have the capacity to monitor the myriad of technical elements impacting markets on a daily basis. It is in these acute periods of extreme volatility and uncertainty where the OCIO can provide measureable value by evaluating markets, acting in a thoughtful but decisive manner in the best interest of their plan beneficiaries, and communicating regularly and transparently with clients.

If you have any questions, please contact Katheryn O'Hara at oharak@pfm.com 717.213.3887 or Perry Giovannelli at 724.972.2388 or giovannelli@pfm.com.

***Katheryn O'Hara** is an Investment Consultant with PFM's asset management business. She is responsible for business development efforts and managing client relationships for PFM's Multi-Asset class management practice – concentrating on pension, OPEB, endowment and foundation, and long-term investment assets.*

Prior to joining PFM's Multi-Asset class management practice, Katheryn started her career at PFM in the firm's Client Services Group in August 2015. As a client service representative, her primary responsibility was to provide customer service and act as a client advocate by providing a "high touch, high value" experience to address client needs.

***Perry Giovannelli** joined PFM in 2015 and is a senior managing consultant with our Harrisburg investment advisory group. He resides in the Pittsburgh area and serves our Western Pennsylvania clients. He brings a wealth of experience to his role. After earning his Masters in Labor Relations, Perry started his career in Human Resources at a major hospital in Pittsburgh. He has over 25 years of business consulting experience, with the last 17 years focused on institutional asset management, working with public and Taft-Hartley defined benefit (DB) plans, religious organizations, higher education, healthcare and charitable and endowment (C&E) assets.*

Prior to joining PFM, he spent eight and a half years with a major bank's Institutional Investment division focused on DB and C&E assets. He has 17 years of experience in the investment industry working with public and Taft-Hartley DB plans, religious organizations, higher education, healthcare and C&E assets. Perry spent several years as a licensed investment advisors working with institutional assets focused on DB and DC retirement plans. He is also an alumnus of Leadership Pittsburgh and President of the Board for East Suburban Citizen Advocacy, a non-profit organization assisting individuals with developmental disabilities

US Retail Innovators to Prosper in Post-Coronavirus Recovery

By: James T. Tierney, Jr. & Anna Toshach, AllianceBernstein

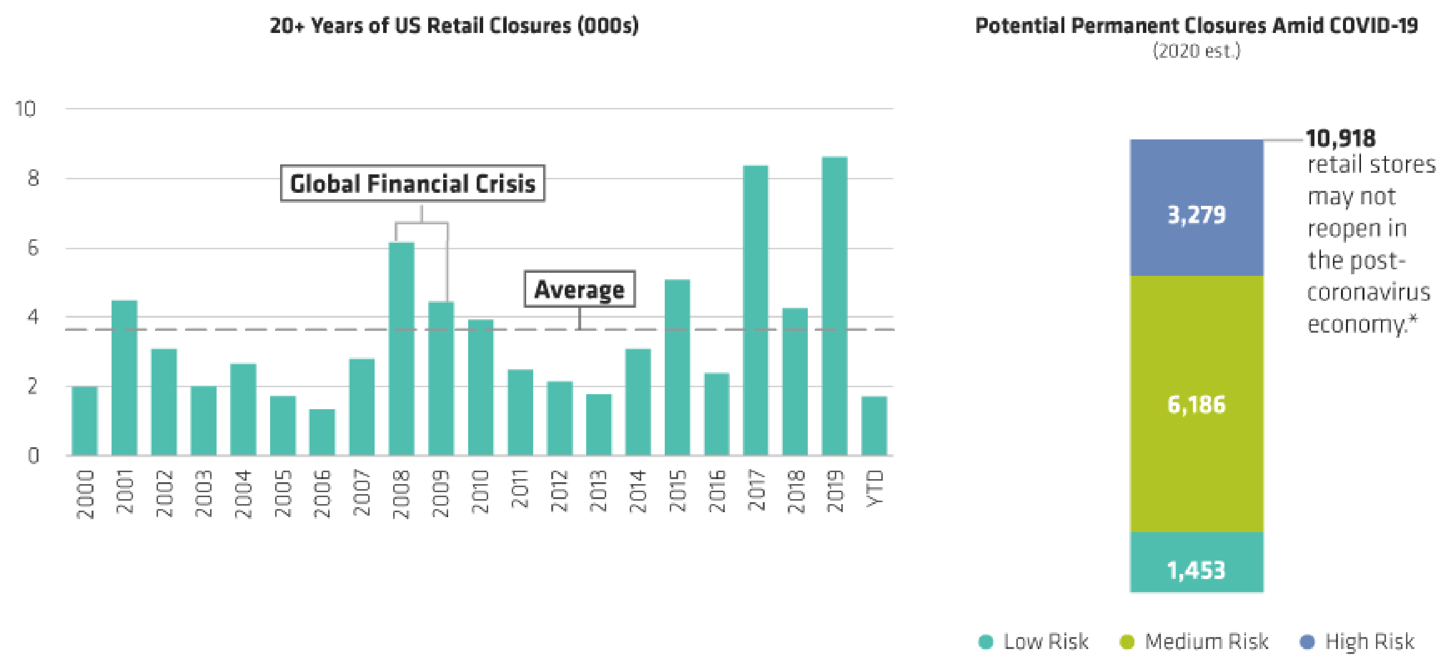
Economic fallout from the coronavirus pandemic has battered a US retail industry already experiencing seismic change. But companies with effective, multichannel consumer models in place before the crisis will compound these advantages on the other side of it.

The US retail industry—from groceries to jewelry—has undergone major structural change over the last decade. Amazon's dominance around product information, availability and convenience has long raised the bar on consumer expectations and continues to fundamentally shift how retailers view their store-to-customer relationships. For equity investors, select companies that have adapted well to these changes deserve a closer look.

Pandemic Store Shutdowns Reflect Legacy Problems

The sea change in how consumers shop has left many retailers behind. Since 2010, over 41,000 US retail locations have closed—40% more than over the prior 10 years, which included the global financial crisis of 2008–2009 (*Display, left*). And more stores will stay closed after the pandemic. Our analysis estimates that one in 10 of the roughly 108,000 stores run by the 74 largest retailers may never reopen in the post–COVID-19 world (*below*). Before the crisis, this 10% permanent closure would likely have taken three years to reach.

More Stores to Stay Closed After the Pandemic



As of April 23, 2020
*Based on AllianceBernstein (AB) analysis of 74 largest US retailers with combined 2019 revenues of $885.3 billion and 107,946 locations
Source: Credit Suisse and AllianceBernstein (AB)

(Continued on Page 15)

U.S. Retail Innovators to Prosper in Post-Coronavirus Recovery

(Continued from Page 14)

J.C. Penney, J.Crew and Neiman Marcus are clear testaments of what happens when retailers stick to old ways. Even when they lost money, these “anchor store” retailers got by with a core model of low fixed operating costs and a steady volume of in-store customers. This legacy brick and mortar model is not ideal in the new retail environment, and flat out can’t work in a global pandemic when you’re forced to turn away shoppers at the door. By late May, J.C. Penney, Neiman Marcus and J.Crew had all sought Chapter 11 bankruptcy protection.

Digital Consumer Experience Redefines Business Models

It’s not that everyone shops on the web. The US Bureau of Labor Statistics reported that online purchases were less than 15% of total retail sales in 2019. But the shelter-in-place rules across the country pushed consumers to try online shopping, and the influence of this permanent and growing wave of ultra-connected consumers can’t be dismissed. At the very least, it requires brick-and-mortar retailers and branded manufacturers alike to rethink and modernize their business models to reach their consumers.

Retailers like Home Depot and Ulta Beauty have kept their competitive edge with a digital transformation in fulfillment operations, and customer interactions and experiences. Also, many name-brand companies such as Nike and Estée Lauder have embraced e-commerce to expand into direct-to-consumer models. This widens their distribution capacity for starters, while also supporting customer-centric innovation and product development down the road.

Retailer Fates Accelerated by the Coronavirus

COVID-19 will be a catalyst for the fates of many US retailers—winners and losers alike. We expect a huge leapfrog effect as market share shifts faster from struggling, physical-centric stores to nimble, omnichannel models. Trends that were expected to unfold over a decade by most estimates will now be compacted into just a few months, in our view
.

Innovators Were Equipped for the Crisis…

Few predicted a pandemic, but retailers that made innovative improvements to address changes in the industry have been better placed to navigate the crisis. For instance, long-standing supply-chain adjustments have helped some move fast to fulfill online orders and accommodate home delivery demands. Innovative loyalty programs and social media strategies, meanwhile, have changed how these retailers engage with customers. And these moves have helped them push forward timely customer updates and gather feedback in the extended global shutdown.

Retailers built to last also prioritized investment in technology. Their shifts to cloud-based infrastructures, for instance, let their leaderships seamlessly connect with employees and, during the crisis, have ensured operational integrity in potentially chaotic work-from-home scenarios. Meanwhile, mechanization and robotics adopted in distribution centers can promote healthy employee social distancing with minimal disruption to operations and output. Most important, companies that had already adopted cross-channel distribution capabilities—including curbside pickup and home delivery— were able to maintain at least some sales volume while their physical stores yielded none.

…and Poised for Long-Term Success

As states begin to slowly ease stay-at-home restrictions, consumers are starting to venture out. No one knows how long it will take to get back to normal. But retailers who stayed ahead of the curve with omnichannel consumer models and other forward-looking strategies will continue to benefit from them well after the storm subsides, those who didn’t, won’t.

(Continued on Page 16)

U.S. Retail Innovators to Prosper in Post-Coronavirus Recovery

(Continued from Page 15)

While retail earnings will not be encouraging during the shutdown, extreme dislocations frequently create a domino effect. The additional debt taken on by weaker players becomes life threatening and causes them to degrade the customer experience—exactly when they need to be enhancing it to recapture shoppers. Investors who can find retailers with healthier balance sheets and the right strategic infrastructure in place to cope with the industry's transformation should be able to find solid sources of consistent long-term earnings growth when the recovery kicks in.

The views expressed herein do not constitute research, investment advice or trade recommendations and do not necessarily represent the views of all AB portfolio-management teams and are subject to revision over time.

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