Strategy RFP

Ninety One

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Previously Investec
Asset Management

Emerging Markets Hard Currency Debt

Quarter ending September 2020

Contents

At Ninety One we believe in investing for a better tomorrow. We want to assist people around the globe to retire with dignity and meet their financial objectives by offering specialist, active investment expertise. We are a patient, long-term business offering organically-developed investment capabilities through active segregated mandates and mutual funds. Our clients include some of the world's largest private and public sector pension funds, financial institutions, corporates, foundations, central banks and intermediaries serving individual investors.

It all began in South Africa in 1991. Since then we have grown to become an established global investment management firm. We continue to develop our owner culture and are committed to building a long-term inter-generational business. The founding leadership is still in place, offering stability and a long-term investment outlook for clients.

We are deeply committed to creating a better, sustainable future. We are conscious of our responsibility, both as investors of other people's money and of our broader responsibility to society. Through our core investing activities, our leadership in the industry, our environmental initiatives and our commitment to our local communities, we seek to make a positive impact in all that we do.

Our overriding aim is to manage our investments to the highest standard possible and thereby exceed our clients' investment and service expectations.

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For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Executive summary

Ninety One has a long history of investing in emerging market hard currency and emerging market local currency debt as well as in emerging market currencies. Our business started in South Africa in 1991. Fixed income and cash management in the diverse markets of Africa has been a core part of this business since the beginning. At the same time, our London-based investment team has been investing in emerging market debt for many years.

In our **Emerging Markets Hard Currency Debt Strategy,** we focus on the hard currency bond markets. We believe this asset class offer excellent opportunities and will see significant developments over years to come.

The Emerging Markets Hard Currency Debt Strategy focuses on emerging market bonds denominated in developed market currencies, typically the US dollar and euro. We run a diversified portfolio across a wide range of markets. This strategy is likely to appeal to clients that are looking for an attractive spread over developed market bonds, with the potential for capital gains (if the credit quality of our preferred emerging markets continue to improve over time), while wanting to avoid the risks of emerging market currency exposure.

The key competitive advantages of Ninety One's Emerging Markets Hard Currency Debt Strategy are:

- Well-resourced team of regional specialists ensures expertise across the entire credit opportunity set
- Best-in-class sovereign credit toolkit ranging from detailed debt sustainability modelling and budget tracking to quantitative models that harness big data sets
- Research feeds into a tried and test credit investment process over a decade old
- Sovereign expertise complemented by corporate expertise. Close collaboration with our Emerging Market corporate colleagues helps us implement country and theme views using the full universe of hard currency debt

There is no guarantee that investment will be profitable; losses may be made. Emerging Market countries may have less developed legal, political, economic and/or other systems. These markets carry a higher risk of financial loss than those in countries generally regarded as being more developed.

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For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Our investment expertise

Within Global Emerging Market Debt, we have two sub-teams; Emerging Market Sovereign & FX and Emerging Market Corporate Debt. The Sovereign & FX team is organised by region, typically working in pairs to cover the regions across three asset classes: sovereign local debt, hard currency debt, and currencies. The Corporate Debt team is organised by sector. The teams work closely together, bisecting countries and sectors to support broader investment views and themes. Investment ideas are generated by the analysts before being debated by the broader team. Once a suggested trade has been approved by the portfolio managers it will filter into relevant strategies via the team's disciplined portfolio construction process.

We regard the strengths of the team as follows:

- Stable team with a strong shared culture
- As one of the pioneers in Emerging Market Debt (EMD), we have extensive experience in local, hard and corporate EMD
- Semi-annual team off-sites facilitate development and innovation.
- The team leverages Ninety One's wider multi-specialist investment framework
- Dedicated portfolio management team focused on finding best ideas across asset categories

Werner Gey van Pittius and **Thys Louw** are the co-portfolio managers for the Strategy and take full responsibility for positioning and performance. The team chart is provided below:

Werner Gey van Pittius
Strategy Leader
EEMEA

Thys Louw
Strategy Leader
Africa & Top-Down

Investment Specialists – Sovereign & Currency

Peter Eerdmans Top-Down	Wilfred Wee Asia
Michail Diamantopoulos CE	Vivienne Taberer LatAm
Antoon de Klerk Africa & LatAm	André Roux Asia
Grant Webster EEMEA & Top-Down	Roger Mark EEMEA
Mark Evans Asia	Peter Kent Top-down

Investment Specialists – Corporate

Victoria Harling Corporate Strategist	Stacy Xie Financials
Alexandre Almosni Liquidity, Risk and Quant	Kevan Salisbury Oil & Gas
Leah Parento Transport & Consumer	Alan Siow Real Estate
Tammy Lloyd Telecoms	Rahul Bhat Metals & Mining
Antonio Luiz Gomes Utilities	

Internal Support

Julia Poszmik Business Manager	Tom Peberdy Portfolio Specialist

Quantitative Support

Nicholas Marshall Quantitative Analyst*	Jonathan George Analyst*

Global Investment Infrastructure Support

Trading | Environmental, Social and Governance (ESG) | Risk & Performance | Implementation

Subject to change not necessarily with prior notification. As at November 2020.

* Shared resource with South Africa Rates

Detailed biographies of the Strategy Leaders can be found in the Appendix.

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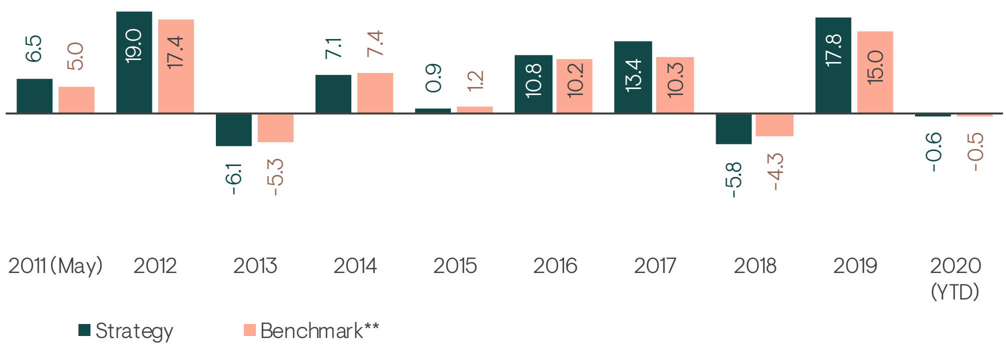
For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Performance

The performance of our Emerging Markets Hard Currency Debt composite is represented in the table and chart below.

Annualised gross performance (USD)

Annual gross performance (USD)



Past performance is not a reliable indicator of future results, losses may be made.

Source: Ninety One, 30 September 2020.

Performance is gross of fees (returns will be reduced by management fees and other expenses incurred), income reinvested, in USD.

The periodic deduction of fees and expenses will have a compounding effect on performance. Example effect of management fees taken monthly over 10yrs on the value of a client's portfolio:

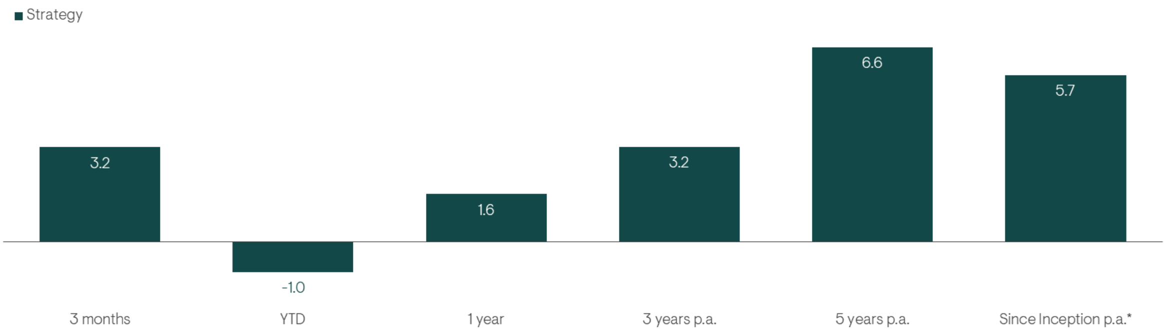
Initial value = $100m, assumed return = 10% p.a., grows to $259m (no fees), grows to $244m (0.60% p.a. net fees). The annualised returns over 10yrs are 10% (gross of fees) and 9.34% (net of fees).

* Emerging Markets Hard Currency Debt Strategy inception date: 01 May 2011.

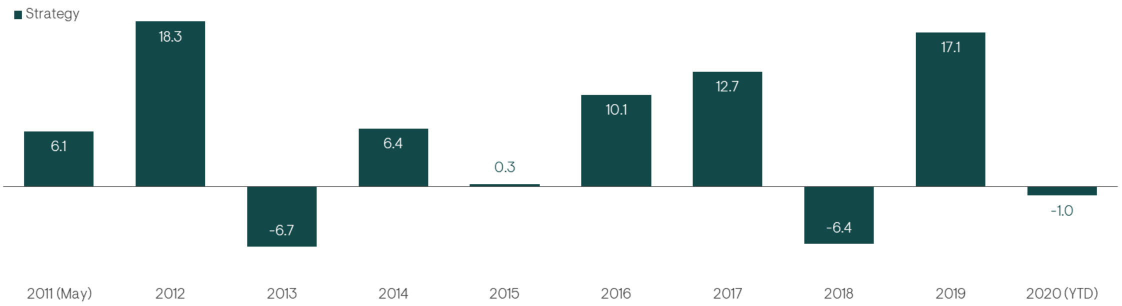
** Benchmark: JPMorgan EMBI Global Diversified. For further information on indices please see the Important Information section.

For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Annualised net performance (USD)



Annual net performance (USD)



Past performance is not a reliable indicator of future results, losses may be made.

Source: Ninety One, 30 September 2020.

Performance is net of fees (net of the highest institutional segregated portfolio management fee), income reinvested, in USD.

* Emerging Markets Hard Currency Debt Strategy inception date: 01 May 2011.

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For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Potential outperformance

Our investment process is specifically designed with the aim of doing well in all market environments. Our 'Compelling Forces' approach ensures that we focus on those countries and currencies where fundamentals, valuation and market behaviour all line up in the same direction. Our process incorporates a wide range of active positions across countries, yield curve plays and issue selection. We believe that this helps to ensure that we are not reliant on one investment theme, dampens volatility and provides the potential for outperformance in a wide variety of market conditions. We believe that relative value opportunities present themselves in both bear and bull markets.

Having said this, being a fundamentals-based investment process, we find that the Strategy has tended to perform best in environments of higher dispersion where returns are being driven by economic fundamentals. Our process relies on the experience of our team, our detailed bottom-up research and the output from our models. All of these are based on fundamentals and, as such, the Strategy has tended to perform best when bonds are responding to changing underlying country dynamics.

Potential underperformance

We believe our Strategy may perform less well in the following environments:

- A period when markets reverse very sharply, particularly when markets are moving from a general bull market to a general bear market or vice versa, is likely to prove particularly challenging for any investment manager.
- We firmly believe that fundamentals drive markets over the medium and long term. Our process is therefore likely to suffer on occasions where markets behave less rationally, are driven by event risk or appear to ignore fundamentals.

For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Investment philosophy

The breadth of the EMD universe provides a unique investment landscape for alpha opportunities. A systematic approach covering a set of consistent factors should provide a framework for effective decision making to exploit investment opportunities. We combine top-down asset allocation with benchmark-agnostic, bottom-up selection to build our portfolio. The latter includes selection within hard currency sovereign and quasi-sovereign bonds, as well as opportunistic exposure to corporate hard currency bond markets as tools to express specific country or macro-views.

The highlights of our approach are encompassed as follows:

Explicit focus on bottom-up country selection

Relative country decisions offer a more consistent alpha signature than top-down calls. We thus target 80% of alpha from relative-value country selection decisions. Our aim is to generate alpha from a high conviction portfolio of best ideas across the sovereign debt space. This means we have typically held zero exposure to a large number of index constituents. At the same time, we have a disciplined risk budgeting approach that ensures our risk profile is not dominated by one or two markets.

Emphasis on peer-reviewed credit fundamentals

Our sovereign analysis is conducted by regional specialists who become genuine experts in the countries they cover. Our analysis is framed within investment scorecards to ensure a systematic, rigorous and disciplined process for idea generation where fundamental analysis is the key driver. This is assisted by an industry leading toolkit, including best-in-class credit tools such as IMF-standard debt sustainability analysis. We have also developed a number of models to exploit the rise in high frequency data in EMs and translate this into clear signals for attractive investment opportunities. Off-benchmark opportunities in local and corporate debt are also highlighted through a similar scorecard approach, tailored to the fundamental drivers of each sub-asset class (FX, rates, corporate credit).

Leveraging the full opportunity set

We are a well-resourced team of regional and corporate sector specialists. Given this comprehensive investment platform we seek to exploit the full opportunity set. Regional specialism ensures analysts cover all markets in detail, including the large tail of frontier markets. This is exemplified by two dedicated Africa specialists. This allows us to fully exploit the investment opportunities in lower rated credits, with a focus on fundamentals and catching an upgrade cycle early. The depth of our investment platform allows us to fully exploit off-benchmark opportunities. All our regional specialists are responsible for idea generation across sovereign bonds, rates and FX in each of their countries. As a result, we have the ability to draw upon our well-resourced team to allocate away from hard currency and into local and corporate debt markets This leads to best ideas being implemented within the portfolio across countries should compelling opportunities present themselves.

The outcome is a diversified portfolio of our best ideas across the sovereign debt spectrum.

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For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Investment process

Our process combines top-down and bottom-up factors. The bottom-up process is the key driver of performance. A thorough analysis creates a ranking of a wide range of countries and currencies. The top-down process determines the general outlook, identifying the different themes for emerging markets.

Top-down
Dedicated process for overall risk exposure and asset allocation

Bottom-up
Rigorous approach to bottom-up selection driven by views of regional and sector specialists

Final portfolio
Structured approach seeks to capture **analyst views** and **manage risk**
We use **bottom-up high conviction ideas** to build portfolio in line with top-down targets

Portfolio built from bottom-up, with top-down risk allocation

Investment ideas are analysed through our Compelling Forces approach whereby three key influences of asset performance are measured to judge an investment's attractiveness.

These three Compelling Forces are:

1. Fundamentals: Are the economic and/or financial fundamentals of the relevant country/corporate strong enough to warrant an investment?
2. Valuations: Are the fundamentals of the country/corporate correctly reflected in the sovereign-, quasi-sovereign or corporate's credit spread?
3. Market Behaviour: Is the particular sovereign, quasi-sovereign or corporate bond over/under owned by the market? What is the issuance profile like, and how does this compare to investor demand? Have other investors become too positive or negative on a particular country or corporate?

Our process is underpinned by a scorecard approach which captures not just the judgmental views of analysts but also objective quantitative model input. Factors that are captured within the Compelling Forces framework are reflected in our asset allocation scorecard and detailed analysis of the economic fundamentals of the country by the regional specialists provide a qualitative aspect to the scorecard.

The scorecards then provide a ranking of opportunities across the asset class and allow us to determine value according to our assessment of the fundamentals of the country duration and the currency that we are investing in. Ultimately however, we apply judgment to determine the final position.

We maintain scorecards for each subclass: local bonds, EM currencies, hard currency sovereign bonds and hard currency corporate bonds.. For the Emerging Markets Hard Currency Debt Strategy, the team focuses only on the hard currency scorecards.

Top-down process

The overall top-down portfolio process includes a general assessment of the outlook for emerging markets debt as well as the main themes in this asset category. The wider Ninety One investment team holds a monthly macroeconomic meeting, the 'Global Macro Forum'. At this meeting the investment teams debate the global economic environment with contributions made by the Multi-Asset and Fixed Income teams. Following this, the Emerging Market Fixed Income team holds its own asset allocation meeting which focuses on a range of emerging markets specifics, such as growth fundamentals, inflation forecasts, the outlook for risk appetite, trade dynamics, geo-politics, valuations and surveys of market positioning and flows. All these factors are captured within the Compelling Forces framework and are reflected in our asset allocation scorecard.

Designed for EMD: top-down process

Nowcasting models are used to predict short-term economic dynamics. Nowcasting estimates are based on our proprietary dynamic factor models using third party data. These models are only utilised as part of the team's wider investment analysis.

Our asset allocation scorecard, an example of which is given below, has two major components. The first, called the "Beta Score", which gives us an overall steer to the amount of risk the portfolio should contain. The second component, called the "Relative Scores", gives a ranking of the relative attractiveness of the four components: hard currency debt, hard currency corporate debt, local currency debt and EM currencies. This component helps to determine how we should allocate relative risk to the individual asset classes in order to achieve our overall risk exposure. More specifically to the hard currency strategy, the discussion informs our overall positioning on the portfolio described below in more detail.

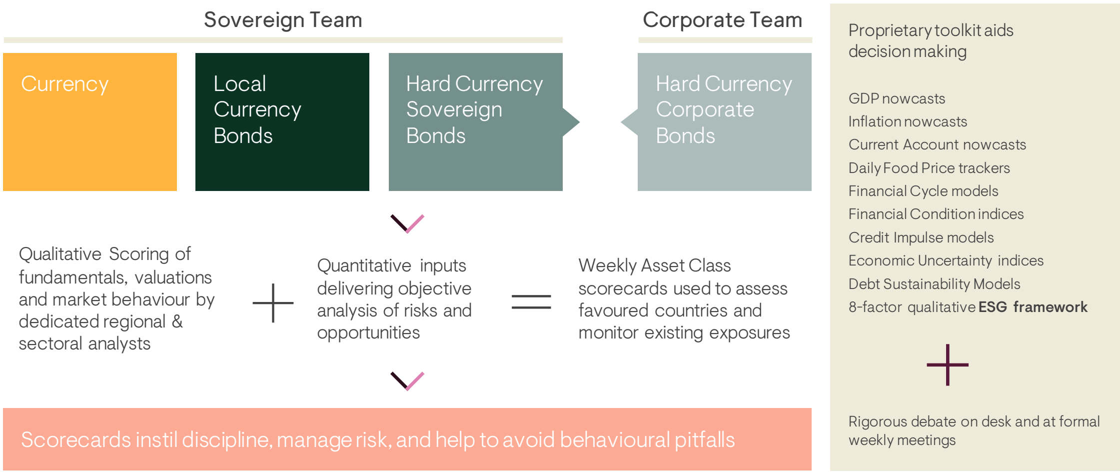
The individual scores range from -2 to +2 and the total score is a weighted average of the individual scores with each Compelling Force accounting for an equal weight. Within the fundamentals component the scores reflect the team's view on how well the state of each factor is being anticipated by the market. For example, is growth going to be stronger or weaker than the market's expectation? The valuation component is scored based on whether the asset class is cheap or expensive relative to the asset class's fundamentals, the current environment and its own fair-value. Finally, the market behaviour component is scored with a contrarian bias based on how the general market is positioned, the relative degree of risk aversion and the amount of issuance expected. For example, a low level of positioning and a high level of risk aversion would be scored positively.

For the Hard Currency Debt Strategy, the main impact of our top-down views will be the overall beta tilt of the portfolio. We also debate and determine our duration, curve positioning, sovereign versus quasi-sovereign and corporate split, investment grade versus high yield split, underlying US Treasury exposure and the themes likely to dominate emerging markets in the months to come. For instance, the tilt of oil versus non-oil (or metals), regional biases and corporate themes. We only use corporate bonds to access markets where there are no sovereign bonds in issue or to capture a certain theme in a market.

Bottom-up process

We are value-driven investors and take a primarily bottom-up approach to investing in emerging market debt. Our sovereign (regional) and corporate (sectoral) analysts conduct fundamental analysis and research of the best investment ideas. They apply their experience and expertise in recommending ideas for the portfolio which are then challenged and debated by the rest of the team.

Designed for EMD: bottom-up process



Bottom-up process – EM sovereign markets

The team's process combines detailed qualitative economic and market views and corporate accounting analysis with proven quantitative modelling. Only those investments we consider the best opportunities make it into our final portfolio. All of the team's analysis is conducted using our Compelling Forces approach.

Both qualitative economic analysis and quantitative economic and financial modelling are key in the team's decision making. On the qualitative side, the team relies on each individual's experience, time spent working in their respective countries/sectors, understanding the fundamentals, and reflecting their views through a disciplined process. This qualitative analysis is supported with detailed quantitative modelling. Over the years the team has built a number of proprietary quantitative models, which aim to highlight risks in the respective countries, as well as potential opportunities. A scorecard brings all these inputs together into a single, disciplined and repeatable framework, as per below.

HY top 10/bottom 10 Hard Currency Scorecard		**Quant Model Scoring**					**Qualitative Analyst Scores**											
							Fundamentals							**Valuation**	**Market behaviour**			
Ranking	**Country**	FV Model	Spread - CDS	Sustainability Score	Trend	Quant Total	Growth	External Financing	Banking Risks	Debt Sustainability	Fiscal & Issuance	ESG	Political Risk	Spread - judgement	Technicals	Positioning	**Qual Total**	**Total**
1	Argentina_USD	5.76	-1.11	3.00	1.59	**0.69**	-1	0	-1	0	0	0	0	3	1	-2	**0.25**	**0.94**
2	Dominican Republic_USD	1.96	-0.57	-0.30	0.70	**0.13**	0	1	1	1	0	0	1	1	0	-1	**0.35**	**0.48**
3	Ecuador_USD	1.57	-1.18	0.28	2.26	**0.22**	-1	0	0	0	0	1	1	2	0	-1	**0.25**	**0.47**
4	Costa Rica_USD	2.32	0.68	0.94	-0.49	**0.26**	0	0	0	-2	0	2	1	1	1	0	**0.18**	**0.43**
5	Brazil_USD	0.09	0.56	-0.50	0.45	**0.04**	1	2	2	0	0	-1	0	0	0	1	**0.38**	**0.42**
6	Angola_USD	0.95	0.04	2.33	0.15	**0.26**	-1	0	-1	-1	1	0	0	2	0	0	**0.15**	**0.41**
7	Ghana_USD	2.79	-0.69	1.18	-0.39	**0.22**	1	0	0	-1	-2	1	0	2	0	-1	**0.15**	**0.37**
8	Paraguay_USD	0.72	-0.99	-0.54	0.57	**-0.02**	0	0	0	2	1	0	0	1	0	0	**0.38**	**0.36**
9	Kenya_USD	1.31	-0.57	0.73	-0.04	**0.11**	1	1	-1	0	-1	1	-1	1	0	1	**0.23**	**0.33**
10	Montenegro_USD	-	0.39	0.00	2.22	**0.20**	-2	2	-1	-2	1	0	-1	2	0	0	**0.13**	**0.32**
45	Nigeria_USD	1.86	-1.34	0.62	0.24	**0.10**	0	-1	-1	-1	-1	-3	0	1	0	-1	**-0.35**	**-0.25**
46	Uzbekistan_USD	-	-0.60	0.00	-2.77	**-0.25**	0	0	0	0	0	0	0	0	0	0	**0.00**	**-0.25**
47	Iraq_USD	0.80	1.17	0.00	-0.97	**0.08**	-2	-2	-1	1	-2	-3	0	1	0	2	**-0.35**	**-0.27**
48	Georgia_USD	0.89	1.15	0.31	0.43	**0.21**	-3	-2	0	0	-2	1	-3	0	0	0	**-0.55**	**-0.34**
49	Vietnam_USD	0.28	-1.87	-0.44	1.41	**-0.05**	0	0	0	0	-1	1	0	-2	0	0	**-0.33**	**-0.37**
50	Croatia_USD	-0.68	-0.53	-0.92	1.47	**-0.05**	-1	1	0	0	-1	0	-1	-2	0	0	**-0.40**	**-0.45**
51	Sri lanka_USD	2.02	2.52	0.00	-1.91	**0.20**	-1	-1	-1	-2	-2	-1	0	-1	0	0	**-0.73**	**-0.53**
52	Mozambique_USD	-	-0.80	1.27	-1.16	**-0.05**	0	2	-2	-3	3	-3	0	-3	0	2	**-0.50**	**-0.55**
53	Lebanon_USD	2.42	1.34	0.00	-2.02	**0.13**	-3	-3	-3	0	-3	-3	1	1	0	0	**-0.88**	**-0.74**
54	Venezuela_USD	-0.74	0.25	0.00	0.25	**-0.02**	-3	-2	-3	-3	-3	-3	-1	2	-2	0	**-1.03**	**-1.04**

Source: Ninety One, 30 September 2020. Note: truncated list shows top 10 and bottom 10. For illustrative purposes only.

The scorecard weights the various model outputs, as well as the analysts' qualitative scores, which are all produced using the above Compelling Forces approach. Scorecards are updated on a weekly basis.

The quantitative models are maintained centrally by the team. The analysts are responsible for checking the data and running the models. The scorecard comprises four quantitative scores: a fair value model for each country, a spread score for the credit spread of each country, a debt sustainability model and a trend score. The scores are captured in the first few columns of the scorecard, summing to Sub-total 1.

The qualitative part of the scorecard starts with a detailed analysis of the economic fundamentals of the country by the regional specialists. A thorough assessment of the external financing situation is crucial at this stage. We also analyse how we expect the country to fare in the current environment. How supportive is global growth? What are the drivers of economic growth: exports, investments, domestic consumption, fiscal expansion?

We then focus on the specific country risk factors. What are the risks to the banking sector? What is the credit quality? What is the outlook for fiscal policy? What is the makeup of the debt? What is the political situation?

Valuation is another key driver of our decision. What are the markets pricing in? Is there value in the yield spread and the overall yield? Are potential rating upgrades or downgrades priced in?

Finally, we again look at market behaviour. In particular, investor positioning, supply/demand and technicals are all important. Crowded trades pose big risks in an environment where investors are becoming more negative on emerging markets. We tend to be contrarian and look for value when other investors are getting overly concerned and selling in a panic.

Qualitative scores are combined to form Sub-Total 2 and then the scorecard is ranked on the overall total score. The final scorecard is debated in the weekly team meeting. Changes in scores are highlighted and the rationale discussed.

The overall ranking is the most important discussion point. As a guide the top-third countries are long candidates whereas the bottom-third are sell candidates. In particular if a country was bought in the top-third and then falls out it also becomes a candidate to sell. We could sell either outright or by buying protection in the form of a credit default swap (depending on relative value). Our ability to make modest use of credit default swaps at the sovereign level enhances our ability to express our country views appropriately. Lastly, we do not adopt a rigid approach where the top scoring country is allocated the largest weight in the portfolio or where we mechanically buy all of the top 10 ranked countries.

We highly prize this scorecard approach. It provides a) discipline as scores are updated every week; b) transparency of views; c) comparability (we can debate two very different countries' scores on for example banking risk) and finally d) the learning process from using historic scoring and trading positions is both humbling and insightful.

Bottom-up process – EM corporate debt markets

While the main focus of the strategy is on country decisions, we may make opportunistic allocations to EM credit markets. We allocate to corporates when we feel valuations provide a more attractive way of accessing exposure to a country, sector or theme than the available sovereign or quasi-sovereigns. As a result we make selective allocations to predominantly investment grade corporate debt opportunities with the support of our dedicated EM corporate debt colleagues.

Within our EM corporate debt investment process, we screen for regions with strong macroeconomic fundamentals and attractive valuations, sectors that exhibit solid corporate trends and have limited exposure to economic and regulatory risks, and rating bands that look attractive on a risk-adjusted basis.

For issues that pass this initial top-down screening process we conduct in-depth fundamental analysis. We review each corporate rigorously using a disciplined 10 factor scoring system. This assesses the business risks facing the company such as regulatory concerns and the industry in which it operates. The scoring process also covers management risk looking at prior performance, experience in the industry and business strategy.

Finally, we scrutinise the financial risk of the business, taking into account debt structure, covenants, capital structure and credit ratios. However, a high score alone is not enough to buy a corporate; it is accompanied by a review of the valuations of similar corporates. Only those issues that offer value against their peers will make it into the final portfolio. Holdings in the portfolio are subject to ongoing monitoring. We choose issues for the long term, but will sell them if negative triggers, identified at the time of purchase, occur, or if the thematic environment changes significantly.

Portfolio construction and implementation

We are benchmark agnostic. We therefore only invest in what we consider the best opportunities in our universe.. The scorecards, which are updated weekly, provide objective rankings of qualitative factors and the output from our suite of quantitative models. The output from these scorecards is always the starting point of our portfolio construction process to which the analysts then apply their judgement. Scorecards provide a disciplined, transparent and repeatable process. They are also invaluable in reviewing historic portfolios, identifying learning points and refining our approach. We will look to source long positions from the top third of the scorecard and look to hold zero exposure from the bottom third. Moreover, unless regional specialists have a positive view we will be zero-weight (rather than market-weight) in a country's bonds. The trades that make it into the portfolio depend largely on final conviction levels, but are also driven to an extent by the top-down process. The team will look to emphasise those bottom-up ideas that fit with their top-down views (e.g. oil).

Our portfolio construction aims to deliver a diversified, but high conviction portfolio of best ideas across the sovereign debt spectrum. We use a 'risk unit' approach based on the riskiness of a country rather than position weightings in constructing diversified portfolios and will not allocate more than two risk units to each position. . A risk unit system ensures that one or two bets do not dominate the strategy's risk-return profile. This means we are not caught up in any one particular theme, which we believe can benefit from multiple sources of alpha. Risk units are defined based on the riskiness of a country as well as liquidity and fall into four buckets ranging from low risk to frontier.

	Size of one risk unit	Bond examples
Low risk	8% or c. 0.60 yrs dur contribution	Chile, Qatar, Malaysia
Medium risk	6% or c. 0.45 yrs dur contribution	Mexico, Turkey, Indonesia
High risk	4% or c. 0.30 yrs dur contribution	Argentina, Georgia, Sri Lanka
Frontier	2% or c. 0.15 yrs dur contribution	Trinidad and Tobago, Montenegro, Mongolia

These are internal parameters, which are subject to change not necessarily with notification to investors.

Typically, the portfolio will have 20-40 absolute country exposures with typical positions of 0.5-1 unit per country.. Combined, our portfolio construction leads to a highly diversified portfolio, but suitably concentrated to achieve our performance targets.

Implementation is assisted by state-of-the-art portfolio management and risk systems. thinkFolio, our main portfolio management system, allows straight-through processing, what-if analysis and ensures that all transactions are within individual portfolio guidelines. The MSCI BarraOne risk model is used for real-time ex-ante risk analysis and to calibrate risk budgeting. Our independent Investment Risk team also uses MSCI BarraOne to calculate and monitor tracking error and Value-at-Risk on a daily basis. When certain levels are reached, specific action is required from the portfolio manager. In addition, a monthly risk report and a detailed quarterly report back are conducted by the risk manager and senior management.

Investment risk management and key characteristics

We have a comprehensive Governance and Oversight structure in place at Ninety One to manage risk throughout the business and this includes our approach to investment risk.

Managing risks across our investment strategies is an integral part of the portfolio management process and consists of both explicit limits as well as additional measures to ensure that the appropriate level of risk is employed to meet the risk and return objectives of our investors.

The four main areas that are of primary focus to Ninety One from an investment risk perspective are:

1. **Philosophy and Process:** Ensuring that investment capabilities adhere to investment style and mandate.
2. **Research and Analysis:** Confirming that suitable research and analysis underpins the investment decision-making process.
3. **Concentration and Liquidity:** Cognisance of the strategy's concentration and liquidity characteristics.
4. **Risk Measurement:** Making sure appropriate risk measurement and stress testing is carried out.

Investment characteristics

The investment characteristics and risk controls of Ninety One's Emerging Markets Hard Currency Debt Strategy are as follows:

Emerging Markets Hard Currency Debt strategy	
Benchmark	JP Morgan Emerging Markets Bond Index (EMBI) Global Diversified

Risk controls	Internal parameters
Typical number of holdings	20-40 absolute country exposures
Duration	Benchmark +/- 2 years
EMFX Exposure	20%
Corporate (excluding quasi's)	30%
Local Currency EM Debt	30%
Investment Grade	Benchmark +/- 30%
High Yield	Benchmark +/- 30%
Maximum per country	2 Risk Units

Derivative use: Futures, IRS, TRS, FX Forwards allowed within above investment rules under UCITS fund with extended investment powers. UCITS rules: maximum 5%, but maximum 10% allowed as long as sum of issuers between 5-10% < 40%.

These internal parameters are subject to change not necessarily with prior notification. These are for information purposes and describe current investment process.

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For further information on the investment team, investment process, performance target and indices, please see the Important information section.

General risks:

The value of investments, and any income generated from them, can fall as well as rise. Where charges are taken from capital, this may constrain future growth.

Past performance is not a reliable indicator of future results. If any currency differs from the investor's home currency, returns may increase or decrease as a result of currency fluctuations.

Investment objectives and performance targets are subject to change and may not necessarily be achieved, losses may be made.

Specific risks:

Default: There is a risk that the issuers of fixed income investments (e.g. bonds) may not be able to meet interest payments nor repay the money they have borrowed. The worse the credit quality of the issuer, the greater the risk of default and therefore investment loss.

Derivatives: The use of derivatives may increase overall risk by magnifying the effect of both gains and losses leading to large changes in value and potentially large financial loss. A counterparty to a derivative transaction may fail to meet its obligations which may also lead to a financial loss.

Emerging market: These markets carry a higher risk of financial loss than more developed markets as they may have less developed legal, political, economic or other systems.

Interest rate: The value of fixed income investments (e.g. bonds) tends to decrease when interest rates rise.

Liquidity: There may be insufficient buyers or sellers of particular investments giving rise to delays in trading and being able to make settlements, and/or large fluctuations in value. This may lead to larger financial losses than might be anticipated.

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For further information on the investment team, investment process, performance target and indices, please see the Important information section.

Environmental, Social and Governance integration

Environmental, Social and Governance (ESG) integration is a priority for the leadership at Ninety One. We believe it adds more value to our clients to treat material ESG issues as an integral part of the investment analysis process rather than as a separate procedure.

We have a dedicated global ESG team, which is steered by a senior Investment Governance Committee. Together with all the investment teams, the ESG team focuses on integration strategies, ESG research and engagement efforts.

ESG integration within sovereign Emerging Market Debt

For the strategies managed by the Global EMD team, ESG factors are considered systematically in our eight factor ESG scorecard. The ESG scorecard provides a strong framework for identifying and understanding the ESG risks and opportunities in our markets.

Proprietary ESG analysis	Investment process integration	Outcomes
Sovereign ESG scorecard – Comprehensive eight factor scoring of **ESG trends** based on **qualitative assessment** by regional specialists – Informed by analysis of third party data, policy analysis and interaction with policy-makers Ongoing collaboration and interaction with ESG team	ESG scores feed into **all** our investment scorecards across sovereign, FX and rates scorecards with 5% weight Complemented by a **Political Risk** score capturing shorter-term **governance** outlook **Engagement** with company management, NGOs and country policy makers	Structured ESG process **embeds ESG risk management** in portfolio construction Ability to **tailor ESG solutions** for institutional clients **Collaboration with clients** ranging from sharing of quarterly ESG trend scorecards and qualitative views to ad hoc ESG interaction on particular topics, companies and countries.

ESG scorecard sub-categories

Environmental Policy			Social Policy			Governance	
Climate Action	Resource Strategy	Land & Water Management	Built Environment	Human Capital	Inclusive Growth	Institutional Capacity	Economic Policy

We have incorporated ESG-related factors in our investment process since the inception of our emerging market debt (EMD) capability. The details have naturally evolved as the asset class has matured and as ESG data has become more readily available.

We would assess ESG materiality as anything that could impact the future return potential of the assets in which we invest. Philosophically, this implies focusing on forward-looking measures of ESG as a country's current ESG "level" is arguably priced (e.g. a country that scores poorly in ESG datasets typically have a higher spread premium). ESG materiality does not necessarily imply a short-term impact on returns but could be (and often is) longer-term structural trends that we should consider in our analysis. We would argue that for sovereign bonds, rates and FX, ESG materiality can emanate from social and environmental trends, as well as governance. Indeed, in some cases all three can be linked.

As such we focus on the qualitative analysis of our regional specialists, framed within a scorecard. This ensures we cover all the key elements of ESG, including 16 of the UN's 17 Sustainable Development Goals (SDGs). This scorecard provides a framework for our assessment of ESG policies and implementation, and their relevance to the long-run prospects for an economy, which in turn can influence asset returns.

ESG is integrated into our standard investment process through the ESG impact score. The ESG impact score is complemented by a political risk score that captures near-term governance shifts (which can potentially impact longer-term ESG trends).

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Both these scores feed into all our investment scorecards – currencies, local rates and sovereign credit. Thus, all other things equal, markets with improving ESG scores will be higher up the scorecard rankings than those that are deteriorating.

Within corporate debt we monitor ESG issues using MCSI ESG Research, which combines quantitative and qualitative analysis to assess companies and countries from an ESG perspective. Corporate governance is one of the eight fundamental factors in our quantitative screen of the benchmark universe.

Our investment scorecards provide a consistent and transparent framework for outlining the investment opportunities in our markets. However, it is not followed mechanically. ESG considerations – like other macro factors – can have an outsized impact from time to time in our decision-making.

Appendix

Strategy leader biographies

Werner Gey van Pittius

Co-Head of Emerging Market Sovereign & FX
Joined the firm in 2003
Joined the industry in 2003

Werner is Co-Head of Emerging Market Sovereign & FX at Ninety One. He is jointly responsible with Peter Eerdmans for all global emerging market sovereign debt strategies. Werner is also responsible for EEMEA research in the team. He moved to London from Cape Town where he was a fixed income quantitative analyst and managed Ninety One's asset and liability matching book. Prior to Ninety One, Werner played professional rugby in concurrence with academic programmes. He holds a Bachelor of Commerce degree in Insurance Science from the University of Pretoria, a Bachelor of Commerce (Hons) degree in Financial Economics from the University of Stellenbosch, and a Master of Science degree in Applied Statistics from Oxford University. In addition, Werner obtained the Society of Technical Analysts diploma and was awarded the Chartered Financial Analyst (CFA) designation from the CFA Institute in 2006.

Thys Louw

Portfolio Manager
Joined the firm in 2012
Joined industry in 2010

Thys is a portfolio manager for the Emerging Markets Hard Currency Debt Strategy and the Africa Fixed Income Opportunities Strategy at Ninety One. He also serves as an investment specialist in the Global Emerging Market Debt team with a particular focus on Africa. Prior to joining the team, Thys spent two years in the firm's Client and Investment Groups. He also spent two years at Anglovaal Industries as an analyst within their corporate finance department. Thys holds a Bachelor of Commerce (Hons) degree in Investment Management from the University of Pretoria and is a CFA charterholder..

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For further information on the investment team, investment process, performance target and indices, please see the Important information section.

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Investment Team

There is no assurance that the persons referenced herein will continue to be involved with investing for this Strategy, or that other persons not identified herein will become involved with investing assets for the Manager or assets of the Strategy at any time without notice. References to specific and periodic team meetings are not guaranteed to be held or fully attended due to reasonable priority driven circumstances and holidays.

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Performance Target

The target is based on Manager's good faith estimate of the likelihood of the performance of the asset class under current market conditions. There can be no assurances that any Strategy will generate such returns, that any client or investor will achieve comparable results or that the manager will be able to implement its investment strategy. Actual performance of Strategy investments and the Strategy overall may be adversely affected by a variety of factors, beyond the manager's control, such as, political and socio-economic events, adverse changes in the interest rate environment, changes to investment expenses, and a lack of suitable investment opportunities. Accordingly, target returns may be expected to change over time and may differ from previous reports.

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