TIMOR-LESTE PETROLEUM FUND

ANNUAL REPORT 2019

August 2020









REPÚBLICA DEMOCRÁTICA DE TIMOR-LESTE MINISTÉRIO DAS FINANÇAS



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List of Acronyms

APT Additional Profits Tax

ANPM Autoridade Nacional do Petróleo e Minerais/National Authority for Petroleum and Minerals

BCTL Banco Central de Timor-Leste/Central Bank of Timor-Leste

BOE Barrels of Oil Equivalent

BU Bayu Undan

CCFP/PFCC Conselho Consultivo do Fundo Petrolífero/Petroleum Fund Consultative Council

CMATS Certain Maritime Arrangement in the Timor Sea

EKKN Elang Kakatua and Kakatua North

EITI Extractive Industry Transparency Initiative

ESI Estimated Sustainable Income

FTP First Tranche Petroleum

IAB Investment Advisory Board

IFSWF International Forum of Sovereign Wealth Funds

JPDA Joint Petroleum Development Area

MBT Maritime Boundaries Treaty

PF Petroleum Fund

PSC Production Sharing Contract

ToBUCA Taxation of Bayu Undan Contractors Act

TST Timor Sea Treaty

UNTAET United Nations Transitional Administration in East Timor

ZOCA Zone of Cooperation – A

US United States

DM Developed Markets

AU Australia

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Message from

Vice-Minister and Interim Minister of Finance



The Petroleum Fund's investment performance was remarkably strong in 2019. Investment returns of 13.25% represented income of \$2.1 billion. enabling the Fund's

value to rise to \$17.7 billion at the end of the year.

Equities have driven the Fund's performance in recent years. Investing in stock markets will add value over the long-term and this requires looking beyond the short-term fluctuations – there will be exceptionally good years like 2019 but also times when the Fund's value falls significantly, such as the last quarter of 2018. This year, 2020, has also been exceptionally volatile as financial markets account for the economic impact of Covid-19 and the measures to contain the virus. The Petroleum Fund's government bond portfolio has helped to mitigate the volatility in equities, by increasing in value when equities fall.

We are very proud of the Petroleum Fund. The framework we established in 2005 has enabled Timor-Leste to save a significant share of petroleum

revenue, while financing the government's expenditure and investments. At the same time, we recognize there are challenges, including the decline in petroleum receipts from Bayu-Undan and the likelihood of lower investment returns.

The Government is reviewing Timor-Leste's expenditure and investment priorities to form part of a longer-term fiscal plan that reflects our roadmap for development. The projections are also needed when determining the Petroleum Fund's investment strategy for the coming years. The Ministry of Finance looks forward to working with the Investment Advisory Board in developing this strategy, along with our colleagues at the BCTL. Good governance remains critical to the Petroleum Fund's success and the Ministry of Finance is reviewing the Fund's framework this year.

The following report explains in detail the developments in 2019, including the record returns. It sets out the current investment strategy and the challenges I mentioned. I hope the Annual Report for 2019 of the Petroleum Fund contributes to the transparency of its management and to the accountability to the National Parliament and the Civil Society.

H.E. Sara I Vice-Minister and Interim Minister

The Petroleum Fund at a Glance

The Fund's market value

\$17,691,816,433

As at 31 December 2019

\$15,803,638,122

As at 31 December 2018

Receipts from oil and gas

\$756.255 million

\$22.786 billion

In 2019

Since inception

Transfers to State Budget

\$969.000 million

\$11.585 billion

In 2019

Since inception

Total return on investment

\$2.101 billion

\$6.490 billion

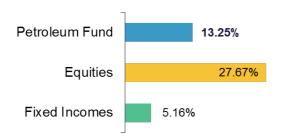
In 2019

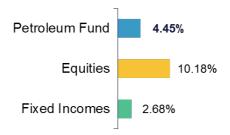
Since inception

The Fund's Investments Highlights

Investment return in 2019

Investment return since inception annualised

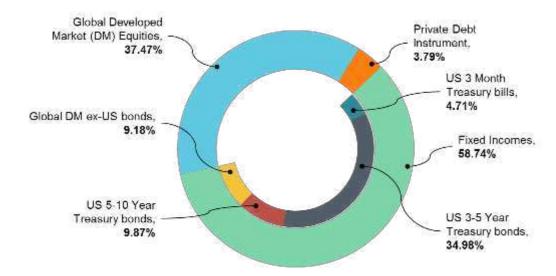




The Fund's annual investment returns since 2005

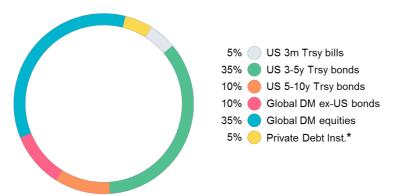


The Fund's actual asset allocations at the end of the year



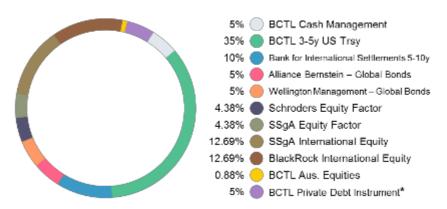
The Fund's Strategic Asset Allocations

The Fund's strategic asset allocation by asset class



^{* 5%} represents the upper limit on the investment in private debt

The Fund's strategic asset allocation by manager



^{* 5%} represents the upper limit on the investment in private debt

A. About the Petroleum Fund

Framework and features

The Constitution of the Democratic Republic of Timor-Leste provides that the country's natural resources are owned by the State and are required to be used in a fair and equitable way in accordance with national interests. Article 139 of the Constitution mandates the establishment of financial reserves from the income derived from natural resources. The extraction of oil and gas from the Timor Sea led to the creation of the Petroleum Fund in 2005 under the Petroleum Fund Law No.9/2005 (3 August 2005), which was amended by the Law No.12/2011 (28 September 2011).

The preamble to the Law states that the objective of the Petroleum Fund is to contribute to the wise management of petroleum revenues for the benefit of both current and future generations. The Fund is a tool that contributes to sound fiscal policy, where consideration is given to the long-term interests of Timor-Leste's citizens. It separates the inflow of petroleum revenues from government spending: all petroleum revenue flows into the Fund and the only outflow is to the State Budget. The Petroleum Fund invests in international financial assets, while the

government's national investments are included in the Budget and approved by Parliament. Investments in petroleum operations are an exception to this framework that was legislated by amendments to the Petroleum Activities Law. This is described in section E

The Fund is integrated with the State Budget. The Petroleum Fund Law specifies the sustainable level of transfers to the State Budget – the Estimated Sustainable Income (ESI) – as 3% of total Petroleum Wealth. Petroleum Wealth is equal to the value of the Petroleum Fund's investments plus the net present value of expected petroleum revenue from proven reserves and approved development fields.

The Petroleum Fund's implied investment objective is to earn a 3% real return over the long-run to offset the value of withdrawals and preserve the Fund's purchasing power for future withdrawals. By providing for the same real value of withdrawals each year, this framework can be said to equally benefit current and future generations. The Fund's investment strategy is described in section C.

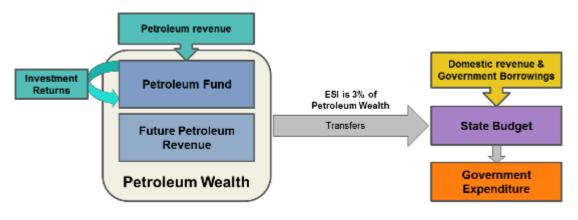


Figure 1: Petroleum Fund and the State Budget
Fiscal Framework

Institutions and governance

Figure 2 sets out the institutions involved in the Petroleum Fund. The National Parliament enacts the key parameters for the Fund in the Petroleum Fund Law. These include the objectives of the Fund, the roles of its institutions, its eligible investments, the guidelines for asset allocation and its risk limits. The legal framework for the Petroleum Fund was supplemented in 2019 by Parliament's amendments to the Petroleum Activities Law (section E).

The Petroleum Fund is structured as an account held by the appointed operational manager, the Central Bank of Timor-Leste (BCTL). The Fund is not a separate institution.

Clear responsibilities and accountability are vital to the Petroleum Fund's success. The Minister of Finance is the executive of the Petroleum Fund and is responsible for the overall management of the Fund as the Government's representative. The Ministry of Finance's responsibilities include determining the investment policy, setting guidelines for new investments and overseeing the Fund's governance. The Minister of Finance is required to seek advice from the Investment Advisory Board (IAB) before making decisions on the Fund's investments and management. The IAB's advice is published each year as part of the Annual Report (Annex XII), or earlier when requested by Parliament.

The BCTL is the Operational Manager of the Petroleum Fund. The BCTL implements the Fund's investments and its responsibilities are set out in an Operational Management Agreement with the Minister of Finance. As section C explains, some of the portfolio is directly managed by the BCTL. The BCTL also undertakes manager searches for the externally managed portion of the portfolio and monitors the appointed external managers. The Ministry of Finance oversees the operational manager.

Lastly, the Petroleum Fund Consultative Council (PFCC/KKFP) advises Parliament on the performance and operation of the Petroleum Fund and on withdrawals from the Fund, including whether the transfers are being used effectively for the benefit of current and future generations.

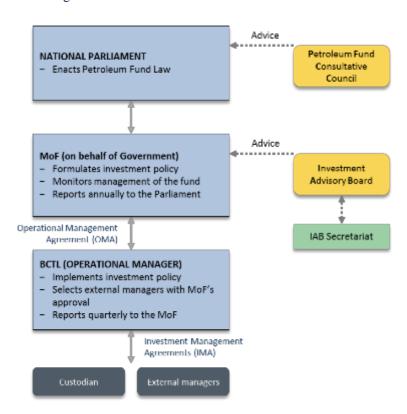


Figure 2: Governance structure of the Petroleum Fund

Transparency is another fundamental principle and the Petroleum Fund Law sets out the reporting requirements for each institution. The Ministry of Finance is responsible for the publication of the Petroleum Fund's Annual Report. This includes the financial statements, which are compiled by the BCTL as Operational Manager. An internationally accredited auditor issues an audit report on the annual financial statements. The Ministry of Finance also undertakes the ESI calculations, which are included in the General State Budget presented to National Parliament.

The BCTL compiles quarterly performance reports to the Minister of Finance. The BCTL also reports to the Ministry of Finance on its internally managed mandates. The annual report and quarterly reports are provided to key stakeholders and are publicly available on the Ministry of Finance (www.mof.gov.tl) and the Central Bank (www.bancocentral.tl) websites.

The Petroleum Fund is an active member of the International Forum of Sovereign Wealth Funds (IFSWF) having joined in 2009. The Ministry of Finance undertakes an annual self-assessment of compliance with the IFSWF's Santiago Principles, which set out the best practice for sovereign wealth funds. The latest assessment is contained in Annex XIII.

There is considerable public interest in the Petroleum Fund's management and performance. The Ministry of Finance and the BCTL are committed to developing the public's understanding of the Fund's management and investment strategy. A joint press

release is held upon the publication of the quarterly performance report. The BCTL and the Ministry of finance also present throughout Timor-Leste at public workshops coordinated by the Petroleum Fund's Consultative Council.

B. Balance and Flows

The Fund's balance increased by \$1,888 million in 2019 to end the year at \$17,692 million (Figure 3). The balance of the Fund is determined by inflows from petroleum revenues, outflows from government withdrawals and investment returns. As Figure 4 illustrates, petroleum revenues contributed \$756 million to the Fund, while the investment return was \$2,101 million over the year. A total of \$969 million was withdrawn to finance the Government's budget. The following sections provide more details on these flows.

Figure 3: Market value of the Petroleum Fund US\$ millions

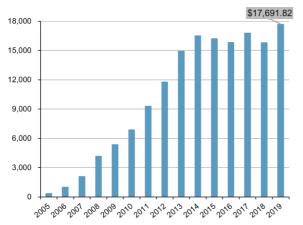
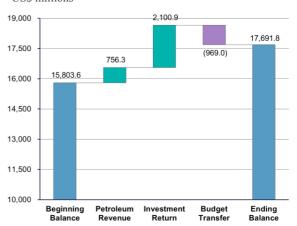


Figure 4: Movement in net-assets during 2019 US\$ millions



Petroleum fiscal regime

The treaty for permanent maritime boundaries was ratified by the Australian Parliament in July 2019 and by Timor-Leste's Parliament in August 2019. The treaty was signed on 6 March 2018 following the compulsory conciliation process initiated by Timor-Leste under the United Nations Convention of the Law of the Sea (UNCLOS). The new Treaty entered into effect on 30 August 2019 when both governments agreed and exchanged the diplomatic notes in Dili.

Bayu-Undan was the only productive field in 2019. It is located in what was formerly called the Joint Petroleum Development Area (Former JPDA). The JPDA was established by the Timor Sea Treaty (TST) in 2002, whereby Timor-Leste and Australia agreed to jointly manage the exploration and exploitation of petroleum resources for the benefit of both countries.

The TST provided that Timor-Leste would receive 90% of the petroleum revenue from the JPDA while Australia received 10%.

Nearly all of the Former JPDA is now in Timor-Leste's exclusive jurisdiction under the Maritime Boundaries Treaty. This includes the Bayu-Undan and Kitan fields, as well as Buffalo and NOGA, which were formerly exclusively in the Australian jurisdiction.

The Maritime Boundaries Treaty (MBT) establishes in Annex B the Greater Sunrise Special Regime with the objective of joint development, exploitation and management of the Greater Sunrise field to benefit both parties. It provides that Timor-Leste will receive 70% of upstream revenue if the pipeline is to an LNG processing plant in Timor-Leste, or 80% of upstream

¹ In 1989, Australia and Indonesia signed the Timor Gap Treaty to jointly share the exploitation of the disputed geographical area in the Timor Sea known as Zone of Cooperation-A (Zone A or ZOCA). Petroleum produced was attributed 50/50 to both Australia and Indonesia. Following the independence referendum in August 1999, Timor-Leste's administration was formally transferred to UNTAET in October 1999 and UNTAET assumed all rights and obligation under the Timor Gap Treaty on behalf of Timor-Leste. Timor-Leste and Australia entered into the Timor Sea Treaty, as a successor of the Timor Gap Treaty, on 20 May 2002, the day Timor-Leste obtained its full administrative authority. The ZOCA was renamed the Joint Petroleum Development Area (JPDA).

revenue if the pipeline is to a plant in Australia. This compares to Timor-Leste's share of only 50% under the Treaty on Certain Maritime Arrangements in the Timor Sea (CMATS) 2006.

Production Sharing Contracts (PSC) specify how revenue is to be shared between the national owners and the oil company contractors. There were effectively two types of PSCs for the Former JPDA. Bayu-Undan and Greater Sunrise are governed by an older PSC, which is in accordance with Annex F of the Timor Sea Treaty.² The newer contracts, such as Kitan, apply a new regime referred to as "Non-Annex F". The Timor-Leste Exclusive Area (TLEA) PSC is broadly similar to the newer JPDA regime, although provides the Government of Timor-Leste an option to take a participating interest.

The PSCs and existing contracts under the former JPDA Fiscal Regime and those partially under the Australian Petroleum Fiscal Regime were transposed entirely to Timor-Leste's Fiscal Regime following the ratification of the Treaty. A Transitional Arrangement process took place between the States, Timor-Leste and Australia, and the contractors. A key principle was "conditions equivalent", which requires the terms for the contractors to be equivalent to the prior regime.

The State's petroleum revenues are comprised of royalties, profit oil and taxes paid by the oil companies. Under the TST, the revenues from the JPDA were shared between Timor-Leste and Australia. Under the MBT, Timor-Leste receives all of the revenues, other than for Greater Sunrise, where Timor-Leste receives the majority share.

Petroleum revenues are comprised of:

- Royalties, which represent the governments' share of production before the oil companies' cost recovery. For projects based on Annex F, "First Tranche Petroleum" (FTP) is 10% of production, which is equally shared between the government and contractors. Non-Annex F PSCs and the TLEA apply royalties of 5% of production, which is the governments' share.
- Profit oil of 40% (50% for condensate under JPDA Annex F). This calculated as gross

- revenue less royalties and the oil companies' exploration and development costs.
- Taxes paid by the oil companies. This includes corporate income tax of 30%; an additional profit tax or supplemental petroleum tax for profitable projects that exceed a hurdle rate of return; and wage income tax for wages received for employment in Timor-Leste.

Under the Transitional Arrangement, all contractors' direct taxes (eg corporate income taxes, withholding taxes, wage taxes) are 100% subject to Timor-Leste's Taxation Act. Adjustments are made to some other taxes to enable "conditions equivalent" and are specified in each PSC.³

Figure 5 illustrates the components of Timor-Leste's petroleum revenues from the Former JPDA, which includes the Bayu-Undan field. The gas condensate field was operated by ConocoPhillips⁴ on behalf of its joint venture partners. The operator's non-tax payments – royalties and profit shares – are collected by the National Petroleum and Minerals Authority, ANPM, as the Designated Authority. Previously that was apportioned between Timor-Leste and Australia but under the MBT it is fully paid to Timor-Leste into the Petroleum Fund. Timor-Leste taxation now applies to 100% of the joint venture's revenues and costs; previously it applied to 90%, with the remainder subject to Australia's income tax rules. The Petroleum-related taxes are paid directly by the contractor into the Petroleum Fund. Timor-Leste has received 100% of the petroleum revenue from Bayu-Undan since September 2019.

Timor-Leste, Australia and the participants in the joint venture are negotiating the development plan for Greater Sunrise. Timor-Leste's government purchased ConocoPhillip's and Shell's participating interests to take an ownership interest in the project and facilitate onshore processing. The Petroleum Fund will receive Timor-Leste's share of royalties, profit oil and petroleum-related taxes. In addition, the Fund will receive the dividends paid by Timor Gap from its participation in the joint venture.

² Annex F of the Timor Sea Treaty separately identified 4 PSCs for specific fiscal treatment that cover the Bayu-Undan and Greater Sunrise fields. The treaty preserved the taxation regime that was in place prior to the transfer of sovereignty to the UNTAET on 25 October 1999. Subsequent agreements and legislation have been introduced dealing with these particular fields.

³ For example, the applicable taxation law for the Bayu-Undan field is the Taxation of Bayu-Undan Contractors Act (ToBUCA). During the Transitional Arrangement process, amendments were made to reduce the Additional Profit Tax (APT) rate from 22.5% to 21.5% to provide equivalent conditions, taking into consideration that the 10% share from Australia was not subject to APT.

⁴ In May 2020, Santos Ltd, an Australian energy company, acquired ConocoPhillip's operating interest in the Bayu-Undan and Darwin LNG Plant. https://www.santos.com/news/santos-completes-conocophillips-northern-australia-acquisition/.

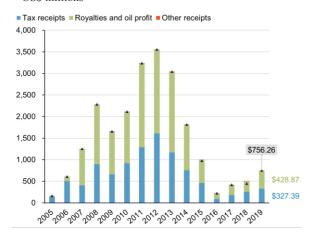
JPDA: 90/10 division TL/Australia Maritime Boundaries Treaty: 100% TL Royalties/FTP \$12.9b ANPM Oll and gas Profit Oil Petroleum companies Fund Petroleum-related Taxes \$9.76 e.g. Income tax, Additional profit tax, Wages \$75m Other payments

Figure 5: Components of petroleum revenues from former-JPDA

Note: Under the Timor Sea Treaty 2002, JPDA revenues were shared 90%/10% between Timor-Leste and Australia. Under the new Maritime Treaty, Bayu-Undan is exclusively in Timor-Leste's jurisdiction.

Petroleum revenue

Figure 6: Annual petroleum revenues US\$ millions



All of Timor-Leste's share of petroleum revenues flow into the Petroleum Fund. The total of petroleum revenues collected during 2019 was \$756 million. The revenues were comprised of \$327 million in petroleum taxes and \$429 million in royalties and profit from oil and gas (Figure 6. See Annex II, Note 16 of the Audited Financial Statements for details). These collections were in accordance with Articles 6.1 (a), (b), and (e) of the Petroleum Fund Law respectively.

Oil and gas production fell slightly from 38.8 million barrels of oil equivalent (BOE) in 2018 to 38.0 million BOE in 2019. The successful execution of the Bayu-Undan infill well (BUIW) development in 2018 maintained the production level. Total production from 2004 to 2019 was 857 million BOE.⁵

The average oil price in 2019 was \$64.4/b, \$6.7/b lower than the previous year's average (Figure 7). Revenue in 2019 was almost 50% higher than the previous year mainly as a result of higher sales. In 2019, 13 condensate cargoes and 7 LPG cargoes were sold, compared to 7 cargoes and 5 cargoes, respectively, in 2018. The operational cost in 2018 was also higher due to the BUIW.⁶

Figure 7: JPDA production and oil prices



Since the Fund's inception, petroleum receipts have totalled \$22,786 million, which includes the initial transfer of revenues collected before the Fund was created. Royalties and profit share amounted to \$12,937 million and petroleum-related tax receipts comprised \$9,659 million. Figure 6 shows that annual petroleum revenue has declined significantly since its peak of \$3,559 million in 2012. The decline

⁵ http://web01.anpm.tl/webs/anptlweb.nsf/pgLafaekDataGasListHTML

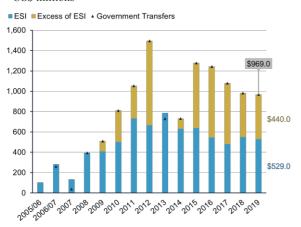
⁶ See ANPM's Annual Report for 2019 published in www.anpm.tl.

reflects both the fall in oil prices and the decline in production (Figure 7). Prices received from Timor's petroleum products track the Brent crude oil price, which shifted lower in 2014. Bayu-Undan has been the only field in operation since Kitan, a much smaller field, closed in December 2015 because of the low oil price. Bayu-Undan's production peaked in 2011 and its productivity has declined as the field matured. The PSCs will expire in 2021 (JPDA 03-13) and 2022 (JPDA 03-12), although production may extend beyond 2022 subject to reserve appraisal and the negotiation of the parties involved. The present value of future petroleum revenues from Bayu-Undan is now estimated at less than \$550 million and will depend on the price and production levels for the remaining life of the field. Most of the country's Petroleum Wealth from Bayu-Undan has already been transformed into financial assets. Investment income and government withdrawals will be the main

Withdrawals

The Government's General State Budget is largely financed by withdrawals from the Petroleum Fund. The Government withdrew \$969 million from the Fund during 2019, to finance its budgeted expenditure of \$1,482 million. The government's

Figure 9: Transfers to the State Budget US\$ millions



The ESI is set at 3% of the Petroleum Wealth, which consists of the Petroleum Fund balance and the forecasted net present value of the future petroleum revenues. Future petroleum revenues only include estimates from fields with approved development plans, which therefore excludes Greater Sunrise and other potential sources of revenues.

The Government has withdrawn \$11,585 million from the Fund since its inception until the end of

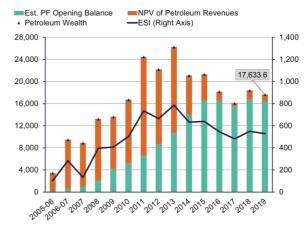
drivers of the Petroleum Fund's balance until new projects come online including Greater Sunrise.

Figure 8: Cumulative flows for the Fund US\$ millions



realised expenditure in 2019 was \$1,233.4 million. The withdrawal in 2019 was \$440 million more than the annual ESI of \$529 million (Figure 9). The withdrawals in 2018 and 2019 were lower than the transfers in the prior three years.

Figure 10: Petroleum Wealth and the ESI US\$ millions



2019. This exceeds the cumulative ESI over that period by \$4,473 million. Since 2009, annual withdrawals have averaged about 5 per cent of Petroleum Wealth, compared to the 3 per cent ESI. The excess reflects the Government's policy to front-load expenditure to enable economic development. Excess withdrawals have contributed to a decline in Timor-Leste's Petroleum Wealth, which also shifted lower with the decline in expected oil prices and revenues. (Figure 10).

Investment income and expenses

The Petroleum Fund made an investment return of \$2,101 million after deducting expenses. This followed the \$460 million investment loss in 2018. Total investment revenue was \$2,125 million in 2019, including interest, dividends and trust income of \$418 million. The remaining \$1,707 million represented increases in market valuations including changes in the foreign currency. Details of the investment performance are included in section D.

Table 1 shows that the expenses incurred in managing the Petroleum Fund totalled \$14.8 million

in 2019. This was lower than the previous year's expenses of \$15.5 million. The BCTL recovered its operating expenses of \$5.1 million, which was below the maximum allowed by the Operational Management Agreement, namely 4 basis points of the Fund's value. The other expenses comprised custody and external manager fees of \$8.5 million and Investment Advisory Board (IAB) expenses of \$248 thousand. Relative to the average size of the Fund, total expenses in 2019 were less than 9 basis points (0.09%).

Table 1 – Management expenses in 2019

Category	US\$ millions
External Managers and Custodian fees	8.501
BCTL Operational Management costs	5.074
IAB expenses	0.248
Other expenses	1.016
Total	14.839

C. Investment Strategy

The Petroleum Fund Law sets out the Fund's eligible investments, the guidelines for its asset allocation and the risk limits. Since January 2019, the Petroleum Fund Law is to be read in conjunction with the First Amendment of the Law No 13/2005, the Petroleum Activities Law, that was modified to allow investments in petroleum operations. The investment in petroleum operations, which is addressed in section E, is an exception to the following general principles that govern the Petroleum Fund's investments⁷:

- The Petroleum Fund invests only in offshore financial assets (Article 15.1). As section A explained, the government's domestic investment decisions are included in the budget, assessed by Parliament and financed by withdrawals from the Petroleum Fund.
- A minimum of 50% of the Petroleum Fund is invested in cash and bonds (Article 15.2).
- A maximum of 50% of the Petroleum Fund is invested in listed equities (Article 15.3).
- A maximum of 5% of the Petroleum Fund is able to be invested in other investments (Article 15.4). This was allocated to the investment in petroleum operations, implemented in conjunction with the amendments to the Petroleum Activities Law.
- A maximum exposure of 3% of the Petroleum Fund in any one issuer or company, other than sovereign issuers (Article 15.5).

The Petroleum Fund Law provides that the investment policy shall apply the principles of

diversification with the objective of maximizing riskadjusted financial returns after taking into account the Fund's purposes, its operational constraints and ability to bear risk (Article 14.1). There must also be sufficient liquidity to fund government withdrawals (Article 14.2). Withdrawals are a determinant of the Fund's investment horizon and are therefore important when formulating the asset allocation, as explained below. The investments are assessed purely on these financial grounds and comply with sound portfolio management practices. The investment in petroleum operations is an exception, where the Government's investment decision also accounted for national economic development objectives and the expected economic and social benefits.

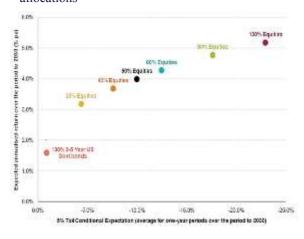
The equity allocation is the key parameter in the Petroleum Fund's investment strategy. The Law in 2005 limited the Fund's investments to low risk assets and the Fund was originally fully invested in US Treasury bonds. Limiting risk in the portfolio was

⁷ Refer to the IAB's Letter to the Minister of Finance, "Proposed Amendments to the Petroleum Fund Law", 5 July 2019.

intended to provide time for the Petroleum Fund to build credibility with stakeholders and allow the Fund's institutions to develop financial market experience. The defensive allocation proved beneficial during the financial crisis in 2008-2009 when global equity markets fell sharply and the returns on US Treasury bonds were boosted by a sharp decline in yields.

Equities were first introduced in 2010, when the upper limit in the Law was effectively 10%. It was agreed that the equity allocation would need to increase substantially in order to meet the implied 3% real return objective. The amendments to the Petroleum Fund Law in 2011 increased the maximum equity allocation to up to half of the Fund and a 40% allocation was decided upon in 2012. At the time, the allocation to 40% equities and 60% bonds was expected to meet the 3% real return objective with a reasonable probability. The equity allocation was implemented gradually over a 2-year period ending in June 2014.

Figure 11: Risks and returns for alternative allocations

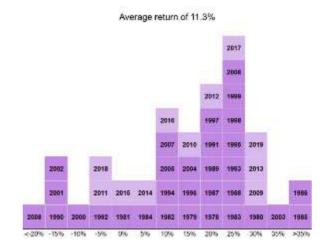


Equities will bring higher returns over the long-run along with higher volatility around the central return expectation. Investors with a long-term horizon can withstand the short-term fluctuations in order to achieve a higher expected return in the long-term. When the analysis was undertaken, a loss once in every 5 years was expected. The 40% equity allocation carried with it an expected loss of 7.3% in the worst 5 years out of 100 (Figure 11). The Petroleum Fund's institutions have educated policy makers and stakeholders that pursuing the return objective requires accepting risk in terms of short-term investment return volatility.

The volatility in equity returns is evident in the historical performance of the benchmark index, the MSCI World. The average arithmetic return over the period is 11.3%, while the standard deviation (the

variation around the average) is 17%. The years when the Fund was invested in equities are shaded in Figure 12. The Fund's annual return has been more variable since equities reached the target allocation in 2014.

Figure 12: Equity annual returns (1978 – 2019) MSCI World Total Return USD Index

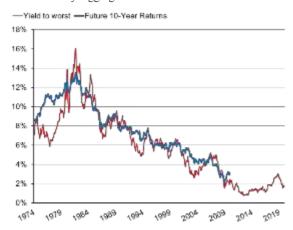


The Petroleum Fund invested in Timor Gap E.P. in April 2019. The Fund's investment was structured as a loan, with the interest repayments to be financed from the Greater Sunrise petroleum development project. The risk of this investment was assessed to be more comparable to the equity allocation than bonds, so it was decided to fund the allocation by reducing the equity allocation from 40% to 35%.

Challenges to the investment strategy

At the time the limits in the Petroleum Fund Law were set and the investment strategy determined, it seemed reasonable to expect a 3% real return from the allocation of 40% equities and 60% bonds. Since then, expected investment returns have been revised down, primarily because of a continuing low interest rate environment. Low yields tend to be associated with low bond returns over longer horizons as Figure 13 shows. A given year may experience a higher return, such as when market sentiment deteriorates and investors seek the safety of government bonds. However, the resulting increase in price coincides with bond yields declining further, which in turn corresponds with lower expected future returns.

Figure 13: Bond yields and future 10-year returns US Treasury Aggregate



By way of example, if the bond portfolio is expected to return 2% per annum and equities are expected to return 6% per annum, then the expected return on a 60% bond and 40% equity portfolio is 3.6%.⁸ This a nominal return, so assuming 2% inflation, the total real return is only 1.6%, which is well below the Petroleum Fund's real return objective of 3%.

This is a simplified example. In practice the capital market assumptions need to account for the Fund's specific asset allocation (see Table 3), including the cash allocation, the duration of the US Treasury portfolio, the hedged non-US bond holdings, the allocation to equity factors and the investment in Timor Gap E.P. There is also considerable uncertainty surrounding the return forecasts so there is some margin of error. At the same time, it is reasonable to conclude that the Petroleum Fund is unlikely to earn a 3% real return over the next 10 years based on its current allocation. The equity allocation would need to increase significantly to have a reasonable probability of reaching that return.

Increasing the equity allocation has been considered and would require amending the 50% limit in the Petroleum Fund Law. Higher equity allocations are common for other sovereign wealth funds with a horizon. long-run For example, Norway's Government Pension Fund Global allows for a 70% weight to equities. Like Timor-Leste's Petroleum Fund, Norway's oil fund serves the objectives of contributing to government finances and saving for future generations. The New Zealand Super Fund has an 80% weight to equities in its reference portfolio. The New Zealand sovereign wealth fund saves to help fund the cost of universal pensions.

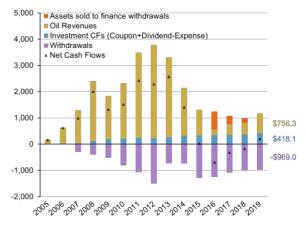
However, significantly increasing the risk in the Petroleum Fund is not appropriate, at least in the current circumstances. The Fund's investment strategy needs to take into account the country's ability and willingness to bear risk. Feedback from stakeholders indicates that the current risk tolerance does not support a significant increase in the risk profile. There is also uncertainty about withdrawals from the Fund and the resulting investment horizon. The Minister decided in 2018, following the IAB's advice, that the 40% allocation to equities was appropriate despite the change in expected returns and the likelihood of withdrawals in excess of the ESI. Equities are required to earn a suitable return to meet the needs of future generations.

The investment horizon is another important determinant of the Fund's investment strategy. Timor-Leste's Petroleum Fund adopted Norway's permanent fund framework, where sustainable withdrawals were to be offset by the expected real investment return, thereby protecting the Fund's purchasing power.

However, withdrawals have exceeded the ESI since 2009 as explained in section B. The Fund's balance continued to grow for a number of years because of the inflows from petroleum revenues (Figure 14). The receipts peaked in 2013 and since 2015 the Fund's balance has fluctuated roughly around \$16-\$17 billion, depending on financial market fluctuations and, to a lesser extent, petroleum revenues.

The petroleum revenue from Bayu-Undan is now coming to an end. Combined with Kitan, the inflows to the Petroleum Fund have totalled \$22.6 billion. Inflows from Greater-Sunrise were expected to commence in 2026, subject to the Final Investment Decision and delays are possible.

Figure 14: The Fund's cash flows US\$ millions



⁸ The expected return on the portfolio is a weighted average of the component returns i.e. 60% * 2% + 40% * 6% = 3.6%.

⁹ IAB advice to the Minister of Finance, "Review of Asset Allocation", 11 May 2018.

As a result, there will be a number of years where the Fund's balance is expected to fall as withdrawals will exceed investment returns. If withdrawals are persistently high during this period, the Fund could potentially be exhausted even if inflows from Sunrise commence as projected.

It is difficult to formulate the Fund's investment strategy when the Fund's cash flow profile is uncertain. As noted, investors with a known long-term investment horizon can take on more risk than other investors. If withdrawals over the next 10 years are contained and the petroleum revenue from Greater Sunrise flows into the Fund as planned, then the horizon is sufficiently long for the Petroleum Fund to maintain a significant allocation to equities.

If, on the other hand, the Fund is to be progressively drawn down and exhausted over the next 10 years, then lower investment risk is warranted. This was considered by the IAB in 2019. The Board's advice to the Minister in November 2019 explained that a 10-year horizon would warrant a gradual but persistent reduction in the equity allocation over the coming years. ¹⁰ The sequence of returns becomes important in the decumulation phase and the risk needs to be managed.

The IAB have emphasised that it is important to have clear projections on the Fund's withdrawal profile over the coming years. This is a matter of fiscal policy and needs to be developed by the Government in conjunction with the Ministry of Finance. In the absence of official medium-term expenditure projections, it may be prudent to assume that the historical levels of withdrawals will continue and adjust the equity allocation accordingly. The cost of reducing the equity allocation is a lower return; the long-term returns from bonds after inflation is expected to be close to zero.

Portfolio and Holdings

The Fund's portfolio reflects the IAB's "Statement of Investment Beliefs and Principles", which is published on the Ministry of Finance's website. 11 The portfolio is constructed efficiently and avoids unnecessary complexity. It is comprised primarily of government bonds and listed equities and diversification is used to remove unrewarded risk. The equity portfolio is diversified across companies, countries and industries, while the sovereign bond portfolio helps mitigate equity risk.

Passive management is the main investment style. A passive manager invests so that the weights of the

individual securities in the portfolio reflect those in the benchmark index. As a result, the mandate's investment performance will correspond with the benchmark's performance. Passive management is usually preferred by the Petroleum Fund as financial markets are seen to be generally efficient and the bulk of returns come from systematic risk factors. It provides cost effective and diversified exposure.

The 3-5 year US Treasury portfolio is passively managed by the BCTL and represents 35% of the Petroleum Fund. The largest allocation to equities is also passively managed; SSGA and BlackRock's passive mandates are benchmarked to the MSCI World excluding Australia, a market-capitalisation based index. The BCTL internally manages the allocation to Australian equities on a passive basis.

The external managers in the bond portfolio are classified as "enhanced passive" managers. The securities held by these managers are allowed to deviate slightly from the benchmark, with the objective of earning higher risk-adjusted returns.

An allocation to equity factors was implemented in August 2019. This reflected the belief that risk factors are systematically rewarded in addition to the market risk premium. The equity factor mandate targets value, quality, low-volatility and, to a lesser extent, size. This is expected to improve the riskadjusted return relative to a portfolio only invested in a market-capitalization index. Implementation involves creating a portfolio of companies that has a higher than average exposure to the targeted factors. For example, to gain exposure to the value factor the fund manager will select companies that are cheap according to valuation ratios, such as the company's accounting book value relative to its market capitalisation (Book to Market value). The characteristics of the equity factors are summarised in Table 2.

Table 2 – Characteristics of Equity Factors

Equity Factor	Company characteristics			
Value	Low valuation ratios e.g. Book to			
value	Market value			
Quality	Higher profit			
Low volatility	Less variable returns			
Size	Smaller market capitalisation			

Two managers were selected by the BCTL to implement the equity factor mandate. The existing allocation to Schroders was reclassified from enhanced passive and SSGA was granted a new mandate, funded from the market capitalisation allocation. The equity factor weight represents one

¹⁰ IAB advice to the Minister of Finance, "Review of asset allocation accounting for fiscal policy", 21 November 2019.

¹¹ https://www.mof.gov.tl/budget-spending/petroleum-fund/

quarter of the total allocation to equities. The performance of the equity factor mandates will diverge from the market-capitalisation weighted benchmark, the MSCI World. While the equity factor mandate is expected to offer higher risk-adjusted returns over the long-term, performance is subject to cycles, which will include periods of adverse relative returns. A long-term perspective is required to capture the systematic return.

The Fund's asset allocations are maintained close to the weights in the strategic asset allocation (Table 3). The BCTL periodically rebalances the mandates when it funds the government's withdrawals. In addition, ranges are specified around the target allocation, which trigger a rebalance when exceeded. The Petroleum Fund does not seek to forecast short-term market movements. Instead the objective is to consistently maintain exposure to systematically rewarded risks over time to ensure the risk premia are realised. By trying to time markets, an investor may fail to realise the risk premia.

Table 3 – Petroleum Fund's investment mandates at the year end

Mandate	Manager	Style	Allocation			
Manuate	Manager	Style	Benchmark	Range	Year-end	
3 Month US Treasury bills	BCTL	Passive	5.0%	± 2.5%	4.71%	
US 3-5 years Treasury bonds	BCTL	Passive	35.0%	± 2.5%	34.98%	
US 5-10 years Treasury bonds	BIS	Enhanced Passive	10.0%	± 1%	9.87%	
CLI IDM LIGHT	Alliance Bernstein	Enhanced Passive	5.0%	± 0.5%	4.56%	
Global DM ex-US Treasuries	Wellington	Enhanced Passive	5.0%	± 0.5%	4.63%	
MSCI DM Equities ex-AU	Schroders	Equity Factor	8.750%	± 1.75%	9.32%	
MSCI DIVI Equities ex-AO	SSgA	Equity Factor	8.73070	⊥ 1./3/0	7.52/0	
MSCI DM Equities ex-AU	SSgA	Passive	25.375%	± 6%	27.23%	
	BlackRock	Passive	23.37370	± 070		
MSCI Australian Equities	BCTL	Passive	0.875%	± 0.45%	0.93%	
Private Debt Instrument	BCTL	Passive	5.0%	n/a	3.79%	

Table 4 – Petroleum Fund's allocations by Cuntries

Country	Fixed Income %	Equities %	Portfolio %
Australia	1.7	2.5	2.0
Canada	1.9	3.4	2.5
Denmark	1.2	0.6	0.9
Eurozone	4.7	10.5	7.1
Hong Kong	0.0	1.1	0.5
Israel	0.0	0.1	0.0
Japan	1.6	8.3	4.3
New Zealand	0.6	0.1	0.4
Norway	0.5	0.3	0.4
Singapore	1.1	0.6	0.9
Sweden	0.8	0.9	0.8
Switzerland	1.0	3.4	2.0
UK	1.7	5.7	3.4
USA	83.1	62.7	74.8
Total	100%	100%	100%

The composition of the Petroleum Fund's equity holdings largely corresponds with the benchmark index. The MSCI World Index is comprised of large and mid-size capitalisation companies that are listed in developed markets. The Petroleum Fund held 1775 companies at the end of 2019. The holdings are reported in Annex II.

Over 60% of the equity portfolio is invested in companies listed in the US. Europe, excluding the

UK, comprises about 16% of the equity allocation, followed by Japan (8.3%), the UK (5.7%) and Canada (3.4%). The Australian allocation of 2.5% is internally managed by the BCTL.

Over 80% of the Fixed Interest portfolio is invested in the United States. This is comprised of the Cash portfolio, US Treasury 3-5 year bonds and US Treasury 5-10 year bonds. The cash portfolio was fully invested in overnight repurchase agreements via

the Federal Reserve Bank of New York. The portfolio is benchmarked to US 3-month Treasury bills and the mandate provides scope to hold instruments with up to 12 months maturity.

The Non-US government bond allocation is benchmarked to a customised index of developed markets. To facilitate diversification, the Eurozone allocation is capped at 30% of the index, while country weights are capped at 10%. The allocations in Table 4 correspond with the index. The Eurozone

represents 4.7% of the bond holdings, while the weights for Australia, Canada, Japan and the UK reflect the maximum country weight.

The currency holdings reflect the compositions in Table 4. In 2019, both the equity and bond holdings were unhedged. Almost three quarters of the total portfolio is denominated in US dollars. The other exposures are to the major currencies, namely the Euro, the Japanese Yen, the UK Pound, the Canadian Dollar and the Australian dollar.

D. Investment Performance in 2019

The Petroleum Fund's total return in 2019 was 13.25%, which is the highest annual return since the Fund's inception. While all asset classes posted positive returns, the equity portfolio's return of 27.7% was the driver of the exceptional performance. This represents the strongest annual performance since equities were introduced in 2010. The fixed interest allocation returned 5.2% over the year and the loan to Timor Gap returned 3.3% in accrued interest since the investment was made in April.



Figure 15: Petroleum Fund's annual investment returns

Table 5 – Investment performance in 2019

Country	Q1	Q2	Q3	Q4	2019	Since Inception
Total Fund	5.90	2.94	0.81	3.05	13.25	4.45
Excess to Benchmark	-0.04	-0.08	-0.03	-0.02	-0.18	0.04
Fixed Income	1.66	2.46	0.88	0.08	5.16	2.68
Excess to Benchmark	-0.07	-0.11	-0.02	-0.03	-0.24	0.00
US 3M Trsy bills	0.59	0.62	0.58	0.40	2.21	1.64
Excess to Benchmark	-0.06	0.00	0.02	-0.06	-0.07	-0.45
US 3-5Y Trsy bonds	1.56	2.31	1.01	0.06	5.02	1.65
Excess to Benchmark	-0.02	-0.11	-0.01	-0.04	-0.18	0.01
US 5-10Y Trsy bonds	2.49	3.55	2.08	-0.70	7.57	2.38
Excess to Benchmark	0.05	0.05	-0.01	0.05	0.14	0.03
Global DM ex.US Trsy	2.02	3.12	-0.54	0.79	5.46	0.41
Excess to Benchmark	-0.09	0.04	-0.02	-0.02	-0.08	-0.58
MSCI DM Equities	12.41	4.02	0.64	8.49	27.67	10.18
Excess to Benchmark	-0.07	0.02	0.10	-0.07	0.00	0.52
Private Debt Instrument	n/a	n/a	1.12	1.11	n/a	3.28
Excess to Benchmark	-	-	0.00	0.00	-	0.00

The strong performance in 2019 saw the Petroleum Fund's annualized return since inception rise to 4.45% (Figure 15). The bond portfolio's annualized return since 2005 is 2.68% and the equity allocation's annualized return is 10.18% since 2010. The return from bonds since equities were introduced in October 2010 is 1.64% per annum.

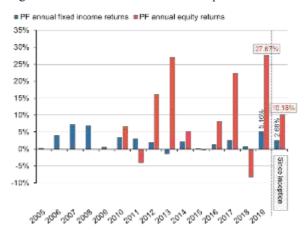
The Fund's annualized real return since inception is 2.51% after adjusting for US inflation. Since equities reached their strategic allocation weight in June 2014, the total portfolio's real return is 2.87% per annum, which is close to the implied target. However, as section C explained, investment returns over the next 10 years are expected to be lower than the 3% real return that corresponds with the ESI rule.

The Fund underperformed benchmark's annual return of 13.44% by 18bps. The majority of the Petroleum Fund's investments are designed to closely track their benchmark indexes. The bond portfolio's performance was below its benchmark's return by 24bps. The internally managed Cash mandate and the 3-5 year US Treasury mandate both underperformed benchmarks. The externally managed 5-10 year US Treasury bond mandate outperformed by 14bps, while the global developed market sovereign bond allocation underperformed by 8bps.

The equity portfolio matched the benchmark's annual return, although the relative performance of the mandates varied. SSGA and BlackRock, the external passive managers, exceeded the MSCI World Index's return. This is largely because the total return index is net of withholding tax and assumes that the maximum tax is paid, while in practice the Fund is exempt from tax in some countries. The internallymanaged passive Australian equity mandate underperformed its benchmark by 33bps over the year. The externally managed equity factor mandate was implemented in August 2019 and the performance of the two selected factor managers have diverged. Schroders's strategy, which was previously classified as an enhanced-passive mandate, outperformed the MSCI World index by 30bps, while SSGA underperformed by 132bps. By targeting factors, the composition of the managers' portfolios will differ from that of the market capitalization benchmark and, as such, their performance is expected to differ from the index's returns.

Over 80% of the Petroleum Fund's fixed interest portfolio is invested in US Treasury bonds and money markets. The performance, therefore, reflects developments in the US economic outlook and

Figure 16: Returns from Bonds and Equities in 2019



expectations for monetary policy. The US economy began 2019 with strong growth, low unemployment and inflation near its target. The positive outlook meant that additional increases in the Fed rate were expected to follow the four hikes in 2018. However, growth and inflation forecasts were lowered over the course of the year, as the global economy slowed and trade tensions between the US and China continued.

The Federal Reserve signalled a shift in its policy stance early in the year to account for slower economic growth and subdued inflation. Yields of US short term bonds declined during the first half of the year as investors revised down their expectations for interest rates. The Fed kept rates on hold at 2.25-2.5% during the first-half of the year and later cut its policy rates three times, with the last cut in October. The Fed then signalled that rates would remain at 1.5-1.75% unless there was a material reassessment of the economic outlook. Quantitative easing ended in September, although liquidity was provided to address pressures in short-term money markets. The US Treasury 2-year yield ended the year 92bps lower at 1.57%.

US longer-term bond yields declined over the first 3 quarters as growth and inflation expectations were downgraded. However, longer-term yields rose in the last quarter when market sentiment shifted to a riskon mode as progress was made on a future "phase one" trade deal between the US and China. Despite the moves in quarter 4, the US Treasury 10-year yield fell 77bps in 2019 to end the year at 1.92%. The US Treasury yield curve shifted lower over the year. The curve inverted a number of times in 2019, which caused investors to worry about historical associations with a recession. For our benchmark indices, US Treasury 3-5 year and 5-10 year yields fell by 84 and 80 bps in 2019 to finish at 1.65% and 1.81%. The decline in yields contributed to returns of 5.0% and 7.6% for the respective mandates.

The Petroleum Fund also invests in government bonds issued by other advanced economies. The largest exposure outside the US is to the euro area countries. The European Central Bank (ECB) ended its bond purchase program in December 2018, a time when the risks to the growth outlook were seen to be more broadly balanced. However, the low growth in 2018 extended into 2019 and inflation remained subdued. In response to the slowdown, the ECB in September cut its deposit rate further into negative territory from -0.40% to -0.50%, while keeping the main refinancing rate at 0%. The central bank announced the resumption of government bond purchases and provided forward guidance that rates will remain at their current levels or lower until inflation converges to near 2%. German 2-year bund yields ended the year little changed at -0.60%, while the 10-year bund yield fell by over 40bps during the year to end at -0.19%.

The Petroleum Fund's other significant exposures in the global fixed income mandate are to government bonds issued by the UK, Japan, Canada and Australia. In the UK, the Bank of England kept its policy rate on hold at 0.75% throughout 2019, having raised rates by 25bps in 2018. The global slowdown and uncertainty surrounding Brexit contributed to weak economic growth. The UK elections in December provided greater clarity that the UK will exit the European Union at the end of January 2020 and enter a transition period. Two-year gilt yields finished the year about 20bps lower at 0.55%, while the 10-year yield declined by 46bps to 0.82%.

Japan recorded solid growth relative to its potential in the first three quarters of the year although the economy contracted in the last quarter after a consumption tax hike was introduced. Inflation remained well below the 2% target. The Bank of Japan (BOJ) maintained very accommodative policy settings. The short-term interest rate remained at -0.1% and the BOJ continued with asset purchases and the commitment to maintain the 10-year bond yield at close to zero. The BOJ provided forward guidance that it would continue with exceptionally low short-term and long-term rates for an extended period of time. Japanese government bond yields were little changed in 2019 with the 2-year yield finishing at -0.13% and the 10-year yield ending at -0.01%.

Canada's economic growth was fairly robust in 2019 and inflation was near its target. Expectations at the beginning of the year were for further rate hikes, following a series of increases in 2018. However, the policy rate was kept on hold at 1.75% as the global outlook deteriorated. The two-year government bond

yield fell by 17bps to 1.70%, while the 10-year yield fell 27bps to 1.70%.

Australia's central bank also began 2019 with a tightening bias. However, the domestic and global outlook moderated during the first half of the year and inflation remained below target. The Reserve Bank of Australia cut rates three times in 2019 to a record low of 0.75% and signalled that an extended period of low rates was needed to achieve full employment and the inflation objective. The change in outlook saw the 2-year government bond yield fall by almost 1% over the year to 0.92% and the 10-year yield ended the year at 1.37% after a comparable fall.

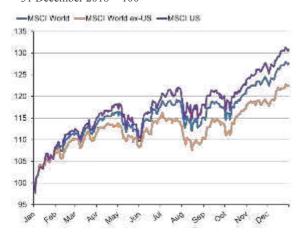
At the aggregate level, the yield on the Petroleum Fund's non-US sovereign bond benchmark fell by 39bps to finish at 0.62%. The decline in yields combined with coupons and a small foreign currency gain resulted in the non-US bond mandate's benchmark return of 5.54%.

-US Cash -US 3-5y Tary -US 5-10y Tary -Non-US
3.0%
2.5%
1.5%
0.5%
0.5%

Figure 17: Government bond yields

Equity markets rebounded strongly from the losses in 2018. Stock prices had fallen sharply in the last quarter of 2018 as a result of a number of factors. Markets were worried about the prospect of further rate increases in the US when global growth was slowing; the trade dispute between the US and China had escalated; and there was a risk of a "no deal" exit by the UK from the European Union. Sentiment in the first quarter of 2019 was boosted by early signs that US monetary policy would remain on hold, rather than be tightened. Stock markets also seemed optimistic about a resolution of the trade dispute between the US and China. This led to strong equity returns in the first four months of the year (Figure 18).

Figure 18: Equity total returns in USD 31 December 2018 = 100



Equity markets subsequently traded in a range for a number of months as market sentiment varied with the outlook for trade. Global equities sold off in May when the US raised tariffs on Chinese imports and China retaliated with its own tariffs. Stocks rebounded in June when trade tensions eased and the Fed signalled that rates would be lowered. Equity markets fell again in August when the US announced new tariffs on China, which was met by a devaluation of the Chinese Yuan. Trade tensions eased in the final quarter and stocks posted strong returns with the surge in investor risk appetite. Negotiations between the US and China led to the announcement of the signing date of a "phase one" trade deal. Looser monetary policy in the US and Europe further supported the risk-on mode, as did the clearer picture on the UK's exit from the European Union.

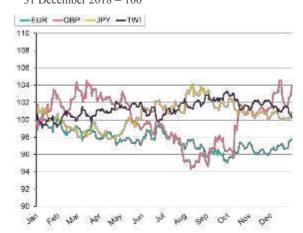
The Petroleum Fund's equity portfolio returned 27.7% in 2019, with all of the major stock markets recording strong gains. In terms of the benchmark indices, US equities outperformed, returning 30.9% in 2019 and reached historically high levels (Figure 18). European equities excluding the UK returned 26.4% in local currency terms, despite the weak economic conditions. Equities in Japan and the UK recorded gains of 18.5% and 16.4% respectively in local currency. Australian equities returned 23.1% in local currency terms.

The USD Dollar Index, a measure of the US dollar relative to the currencies of the United States' major trading partners, finished the year fractionally higher (Figure 19). Countervailing forces caused fluctuations over the course of the year. Downward revisions to expectations for US rates weighed on the US dollar, although other major central banks were also more accommodative. The dollar appreciated when trade tensions escalated along with concerns about global growth. The demand for safe haven assets declined in the final quarter with the progress on the US-China trade negotiations and the USD weakened broadly against other currencies.

The Petroleum Fund's foreign currency exposures are shown in Table 4. The performance of the US dollar varied between the currency pairs. The euro depreciated by 2.2% relative to the USD in 2019, falling in quarter 3 when the ECB cut the deposit rate and announced the reintroduction of quantitative easing. The pound appreciated by almost 4% during 2019, despite earlier falls. Strong gains were recorded in the fourth quarter when the risk of a disorderly Brexit diminished.

The Japanese yen appreciated by 0.9% against the US dollar in 2019. The performance of the commodity currencies varied. The Canadian dollar appreciated by almost 5% against the USD over the year, supported by favourable interest rates and solid domestic growth. The Australian dollar depreciated as interest rates were cut and the economic outlook moderated. However, the yearly fall was limited to 0.4% after the AUD rallied in quarter 4 along with the positive sentiment to risk assets.

Figure 19: US Dollar relative to foreign currencies 31 December 2018 = 100



E. The Petroleum Fund's Investment in Timor Gap

Timor-Leste's Strategic Development Plan 2011-2030 (SDP) outlines the economic, social and political development that will enable Timor-Leste to develop into a strong and prosperous upper middle-income nation by 2030. Economic development is to be founded on agriculture, tourism and the petroleum sector.

Undertaking downstream petroleum activities will allow Timor-Leste to make the most of its oil and gas wealth. This requires developing the core infrastructure and human resources. A national oil company, Timor Gap E.P., was created in 2011 to directly participate and invest in the petroleum sector. The Tasi-Mane project is establishing the infrastructure for the petroleum industry in Timor-Leste's South Coast with a supply base at Suai, a refinery and petrochemical complex at Betano and the LNG-Plant at Beacu.

The Timor-Leste government is committed to onshore processing for the Greater Sunrise fields. To facilitate this, the Government purchased participating interests in the Greater Sunrise joint venture. In September 2018, it contracted to purchase ConocoPhillip's interest for \$350 million and in November 2018 it bought Shell's interest for \$300 million. The aggregate 56.56% ownership interest allows Timor-Leste to fully participate in the upside of the upstream development project.

The Ministry of Finance's guidance was to include the government's \$650 million investment in the State Budget. This followed the framework intended in the Petroleum Fund Law, which was described in section A. The investment was included in the first State Budget for 2019, which was passed by Parliament. However, the \$2.1 billion budget was not promulgated by the President on grounds that included sustainability concerns.

The Government instead chose to implement the investment through an amendment to the Petroleum

Activities Law. 12 The Government amended that law to enable the 5 per cent allocation for alternative assets in Article 15.4 of the Petroleum Fund Law to be applied to investments in petroleum operations in national territory or abroad. The change was approved by National Parliament but originally vetoed by the President. It was promulgated in January after Parliament passed it a second time. The \$650 million investment was removed from the 2019 budget. In March 2019, the Court of Appeals ruled that the changes to the Petroleum Activities Law were legal.

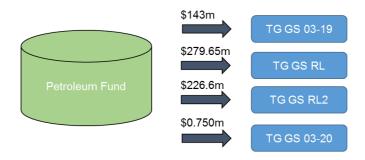
A working group was formed to determine how to implement the government's acquisition. The group was comprised of representatives from the Prime Minister's Office, the Ministry of Finance, the BCTL as operational manager of the Petroleum Fund, the Ministry of Petroleum and Minerals, ANPM, and Timor Gap E.P. The group agreed that the Petroleum Fund Law confines cash transfers out of the Fund to the State Budget account. If the acquisition was not included in the budget, it would need to be funded by a financial investment by the Fund with a return separate from Timor-Leste's share of petroleum revenues expected from the project.

The working group decided against the Petroleum Fund directly investing in the joint venture as an equity interest for a number of reasons. ¹³ It instead decided to structure the Petroleum Fund's investment as a loan to Timor Gap E.P., which would use the proceeds to acquire the interests in the joint venture. Loans were made to four subsidiaries that held the related Production Sharing Contracts and Retention Leases. The agreed interest rate was 4.5% per annum, with a grace period on repayments for the first 8 years to allow time for development and production to commence. Interest would accrue during the grace period and the loan would be repaid over the following 10 years.

¹² Petroleum Activities Law No. 13/2005, of 2nd of September as First Amended by the Law No. 1/2019 of 18th of January.

¹³ Firstly, participants in the joint venture are required to fund development. However, further investment by the Petroleum Fund was not possible because of the exposure limits in the Petroleum Fund Law. Secondly, it was preferable for the interest to be in Timor Gap E.P.'s name in the event the oil company needed to borrow to finance its contribution for development. The Petroleum Fund's investments are required to be held in the BCTL's name. Thirdly, the legal framework governing the JPDA required the contract to be with a limited liability corporation specifically established for the purpose of the contract. Finally, alternative structures were preferred on operational grounds.

Figure 20: Petroleum Fund's investment in Timor Gap E.P.'s subsidiaries



A number of matters relating to the Petroleum Fund Law were raised during the working group's meetings by both the Ministry of Finance and the BCTL. Some of these matters were also raised by the IAB in its advice to the Minister of Finance on 15 February 2019. The counsel from the government's advisors was that the investment complied with the applicable laws and written confirmation was provided by the Prime Minister's office to the Interim Minister of Finance in February 2019.

The Minister of Finance then followed the requirements set out in the Petroleum Fund Law. The Minister adopted the advice from the Investment Advisory Board to finance the investment by reducing the Petroleum Fund's equity allocation from 40% to 35%. The terms of the Petroleum Fund's investment were confirmed by the Council of Ministers ¹⁴ to reflect that this was a special case where effectively the investment decision was made by the government. The associated rules and criteria governing the investment were published and the Minister presented to Parliament the new investment and the change in the Fund's asset allocation.

The loans from the Petroleum Fund to Timor Gap E.P.'s subsidiaries were made on 10 April and Timor Gap E.P. acquired the interests in the Greater Sunrise development on 15 April. Since then, the investment has accrued interest and was valued at \$671.3 million at the end of 2019. The investment is valued on a buy and hold basis amortised over its life and is included in the value of the Petroleum Fund and the Fund's performance reporting.

The Ministry of Finance supports amending the Petroleum Fund Law to incorporate all provisions that apply to the Fund's investments. Amendments will also make it clear that the investment in petroleum operations is an exception to the general principles that govern the Fund's international financial investments as set out in Articles 14 and 15

of the Petroleum Fund Law, as described in section C. For this reason, a new article in the Petroleum Fund Law was proposed to incorporate Article 22(6) of the Petroleum Activities Law as well as the special rules and criteria that applied to the existing investment in petroleum operations, namely:

- The investment was able to be in national territory or abroad.
- National development objectives could be accounted for when determining the financial terms. While this could be inferred from the amendments to the Petroleum Activities Law, according to the Petroleum Fund Law investments are assessed purely on financial criteria.
- The investment would be limited to 5% of the Petroleum Fund calculated at the time of the investment. The loan to Timor Gap E.P. was not a liquid investment and thereby warranted different rules from the Fund's investments in equities and fixed interest that can be bought and sold to comply with the exposure limits on an ongoing basis. At the time the \$650 million investment was made, the Fund's value was about \$17 billion and the loan was within the 5% limit in the law. However, the investment is likely to exceed 5% over time as the Fund's balance falls with withdrawals and depleting petroleum inflows, while interest accrues on the loan during the grace period. The volatility in investment returns and the Fund's value could also trigger a breach.
- Removing the 3% limit to any one company or issuer. The new Maritime Boundaries Treaty requires consolidating the existing PSCs into one contract and Timor-Leste's ownerships interests are also to be consolidated into one entity. If the Petroleum Fund's loans are transferred to the new entity, then the 3% exposure limit in Article 15.5 of the Petroleum Fund Law will be exceeded. Removing the limit for this

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¹⁴ The Council of Ministers approved Government Resolution No. 10/2019, of 27th of February regarding Rules and Criteria for Selection, Management and Evaluation of Investment made by the Petroleum Fund, in the Terms and under the provisions of paragraph 6 of Article 22 of the Petroleum Activities Law.

investment also better reflects the underlying economic exposure.

The 5% exposure limit at the time of the investment amounts to \$850 million. In effect, that allows for an additional \$200 million investment in petroleum operations. Any additional investment would be a decision for the Government or the Minister of Finance as the Government's representative. It would also need to comply with the requirements of the proposed new article, which incorporates Article 22.6 of the Petroleum Activities Law and reflects the rules and criteria presented by the Minister to Parliament in February 2019. 15

The Minister of Finance sought advice from the IAB on the proposed changes to the Petroleum Fund Law. The Board supported the proposal to incorporate into the Petroleum Fund Law the investment in petroleum operations and its special criteria. ¹⁶ The proposed amendments were agreed to by the government and passed by Parliament. However, upon review, they were ruled to be unconstitutional by the Court of Appeals and vetoed by the President. Consequently, the issues with the exposure limits in the Petroleum Fund Law remain outstanding and could potentially be breached in future.

F. IAB Advice and the Fund Going Forward

The Investment Advisory Board (IAB) advises the Minister of Finance on matters relating to the investment strategy and management of the Petroleum Fund as enacted by Article 16 of the Petroleum Fund Law. The IAB's advice is required to be published in the Annual Report according to Article 24 of the Petroleum Fund Law.

The IAB held 11 meetings and two workshops in 2019. The IAB's advice to the Minister of Finance in 2019 covered three topics, namely: the Fund's investment in petroleum operations and the subsequent proposed changes to the Petroleum Fund Law; hedging the currency exposure in the non-US sovereign bond portfolio; and reviewing the Fund's asset allocation in light of fiscal policy. The advice to the Minister are included in full in Appendix XII and summarised below.

The investment in petroleum operations and proposed changes to the Petroleum Fund Law

The Minister of Finance on 8 February 2019 sought advice from the IAB regarding the Government's proposal that the Petroleum Fund invest in petroleum operations.

The Board's letter on 15 February 2019 began by noting that the IAB was not providing an opinion on the investment in the joint venture. The advice sought by the Minister related to implementation of the Government's decision to invest in the Greater Sunrise Joint Venture. The proposed investment by the Fund was structured as private debt issued by Timor Gap E.P., which would use the proceeds to

finance the acquisition in the joint venture. The Board advised that the investment's risk profile supported funding the acquisition from equities. The equity allocation would fall from 40% to 35% to allow for an allocation of up to 5% of the Fund in the private debt.

The Board noted that the legal advice from the Prime Minister's Office, shared by the Minister of Finance, supported the transaction. The investment was enabled by amendments to the Petroleum Activities Law, a change that the IAB had not advised on. The amendment departed from the framework in the Petroleum Fund Law, where domestic-orientated investments were made through the State Budget, while the Petroleum Fund invested in international financial markets with the objective of maximizing risk-adjusted returns.

The Board noted that the national development objective that motivated this investment was not part of the Petroleum Fund Law. The agreed interest rate on the loan was comparable to less risky investments, reflecting the development objectives. To the extent that the objective of the Petroleum Fund had changed to include economic development, the Board recommended that the Minister evaluate best practice for domestic development funds. In that event, the IAB advised that good governance required broad involvement of stakeholders in exploring the need for a change in objectives in the Petroleum Fund Law.

The Board also warned that the investment was expected to breach the 5% upper limit in Article 15.4 of the Petroleum Fund Law in coming years. The

¹⁵ Published in Diploma Ministerial No. 4/2019, of 1st of March

¹⁶ IAB advice to the Minister of Finance, "Proposed Amendments to the Petroleum Fund Law", 5 July 2019.

private debt cannot effectively be sold so this will require a change in the Petroleum Fund Law.

The Minister of Finance adopted the Board's recommendation and funded the investment in petroleum operations by decreasing the equity allocation. The Ministry of Finance worked with the government's legal advisors on amending the Petroleum Fund Law to address the IAB's concerns.

On 1 July 2019, the Minister requested the IAB's advice on draft amendments to the Petroleum Fund Law to incorporate the investment in petroleum operations and its special characteristics. The IAB's letter of 5 July 2019 supported the proposed changes. The Board agreed with consolidating into the Petroleum Fund Law the provisions in the Petroleum Activities Law that applied to the Fund's investments. The Board approved the structure, which divided the Fund's investments into international investments in financial markets (which would continue to be governed by Article 14 and 15 in the Law) and the investment in petroleum operations that would be governed by the new article with its special criteria. The IAB clarified that the proposed change to incorporate the existing investment in Timor Gap into the Petroleum Fund Law was not a change in the general policy of the Fund. Rather, it was an exception that was subject to a 5% exposure limit. Broader changes, such as creating a domestic development fund, would require a much more thorough assessment and public consultation process.

Currency hedging and the bond portfolio

The IAB in its letter of 30 May 2019 recommended hedging the currency exposure of the non-US sovereign bond portfolio. The advice reflected earlier analysis that supported hedging. Data showed that by far the bulk of Timor-Leste's expenditure was effectively in US dollars, meaning the purchasing power of the Fund was best represented by the US dollar, with some degree of exposure to regional trading partners. The Fund's unhedged currency exposures in the equity and bond portfolio reflected the major developed market currencies rather than our trade partners. Analysis also showed that the unhedged currency exposure was unlikely to act as a diversifier for a US dollar investor such as the Petroleum Fund. The return for hedged and unhedged exposures were expected to be similar over the longrun, while the unhedged currency exposure tended to result in additional volatility.

The Board recommended hedging the bond portfolio to account for these strategic considerations. The advice did not incorporate a view on the future path of the US dollar.

The advice had been postponed to allow time to address issues with implementation. The Fund's two existing managers were unable to implement hedging through the Fund's custodian. In January 2019, the BCTL reported that the Bank for International Settlement (BIS), an existing external manager, was able to implement currency hedging on behalf of the BCTL. The IAB adopted the BCTL's proposal that the BIS be appointed as manager of the hedged bond mandate and replace the existing managers. The enhanced passive mandate has a tracking error limit of 50 basis points, with expected outperformance before fees of 15 basis points per annum over a rolling three-year period. The investment universe was expanded to allow for highly rated Supranational, sub-Sovereign and Agency bonds. The IAB also recommended that management of the US Treasury 5-10 year mandate be transferred from the BIS to the BCTL and be managed on a passive basis. The Minister of Finance adopted the IAB's recommendations.

Review of the asset allocation

The IAB's letter to the Minister of 21 November 2019 followed a three-day workshop with the Interim Minister of Finance in October. The workshop included material on the Fund's governance framework as well as reviewing the Petroleum Fund's investment strategy.

The advice followed asset allocation reviews in 2016 and 2018 that expressed concerns about the expected depletion of the Fund given the level of withdrawals and declining oil revenues. It also reiterated the advice in 2018 that asset class returns are expected to be lower in the prevailing low interest rate environment.

The analysis presented to the IAB during the workshop indicated that the Petroleum Fund will be exhausted in a little more than 10 years unless fiscal policy changes. The projections were based on the budget forecasts at that time, namely the 2020 Budget Law released in October 2019. The Board warned that the ability to recoup a loss after a sharp fall in equities is limited within this projected lifespan and the sequence of returns must be managed. Based on the fiscal outlook presented, a significant reduction in the Petroleum Fund's equity allocation is advisable, to be implemented gradually over a number of years. With low bond yields, the opportunity cost of the change is a much lower expected investment return.

The Board explained that there is still time to develop a sustainable fiscal path. The ESI is not serving as a useful fiscal anchor for policy makers so a fiscal plan is required to balance the need for development, the country's absorptive capacity and the desire to maintain some level of savings in the Fund. The Board encouraged the Ministry of Finance to work with other key ministries to develop projections for both withdrawals from the Fund, as well as inflows from new petroleum revenues. Evidence of a long-term horizon for the Fund would support maintaining a significant equity allocation. Otherwise, the Board will need to advise reducing the equity allocation. The Board noted its intention to discuss this at the next IAB workshop in Dili, scheduled for May 2020.

The Fund going forward

The BCTL implemented the changes to the bond portfolio in 2020. The BIS began managing non-US sovereign bonds on a hedged basis at the beginning of May 2020. The BCTL took over management of the US Treasury 5-10 year mandate in late May 2020.

The focus in 2020 is on the Petroleum Fund's investment strategy, accounting for the likelihood of

decumulation. The IAB held a workshop in May to discuss withdrawals and the Fund's horizon. The Board will meet with the newly appointed Minister of Finance to discuss the challenges of setting the investment strategy in the absence of clear withdrawal projections.

As section E explained, the proposed changes to the Petroleum Fund Law need to be revisited, given that the investment in petroleum operations is expected to breach the exposure limits in future.

The Ministry of Finance is also working on the Fund's governance, including reviewing and updating the Operational Management Agreement with the BCTL. In addition, the Ministry of Finance and BCTL are working collaboratively on researching asset classes that may potentially improve the Petroleum Fund's portfolio. These need to be assessed in the context of future drawdowns.

ANNEXES

Annex I. Statement by Director General of Treasury

Petroleum Fund of Timor-Leste General Information 31 December 2019

Minister of Finance Fernando Hanjam

Sara Lobo Brites (Acting Minister, 25 Jun 2018-28 May 2020)

Director General of TreasuryRui Ferreira Magno

Members of Investment Advisory Board Olgario de Castro

Gualdino da Silva Torres Trovik Prof. Michael Drew

Ex Officio (non-voting) Venancio Alves Maria

Rui Ferreira Magno (alternate, Ernesto da Conceição Silva)

Governor of Central Bank of Timor-Leste Abraão de Vasconselos

Executive Director of the Petroleum FundVenancio Alves Maria

Operational Manager Banco Central de Timor-Leste

Avenida Xavier do Amaral, no. 9

Dili

Timor-Leste

Investment Managers Banco Central de Timor-Leste

Bank for International Settlements

Schroders Investment Management Limited

State Street Global Advisors

BlackRock Investment Management Australia Limited

Alliance Bernstein Wellington Management

Members of Petroleum Fund Consultative Council Pe. Julio Crispim Ximenes Belo

Izilda Imanuela da Luz P. Soares

Nuno Eugénio Goulart Julio Fernandes Juvinal Dias Zelia Fernandes

Hernani Agostinho Soares Martinha da Silva de Jesus

Custodian J P Morgan Chase Bank N.A.

Independent Auditor Deloitte Touche Tohmatsu

Petroleum Fund of Timor-Leste Statement by the Director General of Treasury 31 December 2019

BACKGROUND

The Petroleum Fund Law No. 9/2005 promulgated on 3 August 2005, as amended by Law No. 12/2011, of the 28th September, established the Petroleum Fund of Timor-Leste ("Petroleum Fund"). The Ministry of Finance is responsible for the overall management of the Petroleum Fund and the Banco Central de Timor-Leste ("BCTL") is responsible for the operational management. In accordance with a Management Agreement dated 12 October 2005 and amended on 25 June 2009 between the Ministry of Finance and the BCTL, BCTL is also responsible for maintaining the books of account for the Petroleum Fund on behalf of the Director General of Treasury.

FINANCIAL STATEMENTS

In accordance with Article 21 of the Petroleum Fund Law, the financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS). The statements are:

- Statement of profit or loss and other comprehensive income,
- Statement of financial position,
- Statement of changes in capital,
- Statement of cash flows, and
- Notes to the financial statements

These financial statements cover the year ended 31 December 2019.

The Petroleum Fund's financial statements are the most complex IFRS financial statements produced in Timor-Leste. To optimize the readability of the notes to a wide audience, the notes are structured to provide the reader with:

- a general introduction to the subject matter of the note,
- financial tables elaborating on the data in the primary statements,
- a description of the risks, important judgements or key assumptions that have been made in recording and presenting the data, and
- the related accounting policies.

The financial statements have been independently audited by Deloitte Touche Tohmatsu whose audit opinion is attached to the financial statements.

PETROLEUM FUND CAPITAL

The Petroleum Fund had capital of US\$15.8 billion on 1 January 2019 (2018: US\$16.8 billion). During the period, taxes and other petroleum revenue under Article 6 of the Petroleum Fund were US\$0.8 billion (2018: US\$0.5 billion). The Petroleum Fund recorded a profit of US\$2.1 billion (2018: US\$0.46 billion loss) during the period. A summary of transactions for the income is given in the "Statement of profit or loss and other comprehensive income".

US\$0.97 billion was transferred from the Petroleum Fund to the Consolidated Fund during the year. The capital of Petroleum Fund as at 31 December 2019 was US\$17.7 billion (2018: US\$15.8 billion). A summary of the transactions is given in the "Statement of changes in capital".

BENCHMARKS AND PERFORMANCE

During 2019, the asset allocation of the Petroleum Fund was 55% fixed interest securities, 35% global equities, 5% alternatives and 5% cash. The Investment Advisory Board considers this to be an appropriate level given the long term investment horizon of the Petroleum Fund.

The Board intends to review the investment strategy and asset allocation of the Petroleum Fund regularly, taking into account the expected returns and risk of investments along with the projected cash flows for the Fund, including the Government's withdrawals.

Petroleum Fund of Timor-Leste Statement by the Director General of Treasury 31 December 2019

Summary of benchmarks		
Benchmark index	As at	As at
	31 December 2019	31 December 2018
Fixed interest		
BOA Merrill Lynch US Government 3-5 Years	35.0%	40.0%
BOA Merrill Lynch US Government 5-10 Years	10.0%	10.0%
Developed Market Sovereigns - Custom	10.0%	10.0%
Total fixed interest	55.0%	60.0%
Global equities		
MSCI World	35.0%	40.0%
Total global equities	35.0%	40.0%
Alternatives	10	
Special Private Debt Instrument	5.0%	
Total alternatives	5.0%	
Cash		
3 Months US Treasury Bills	5.0%	*
Total eash	5.0%	¥
Total benchmark	100%	100%

Performance

In accordance with the Article 24.1(a) of the Petroleum Fund and the provisions of the Management Agreement, the Petroleum Fund assets were invested in mandated instruments during the year. The list of instruments held as at 31 December 2019 is given at Note 24. The credit exposure by credit rating is given at Note 14(b)(iii). The performance of the Petroleum Fund during the period has been in accordance with the mandate of the Management Agreement.

Net profit on financial assets at fair value through the profit or loss has been significant at US\$1.7bn in 2019 reflecting the performance of global equities during the year. The net foreign exchange gain reflects the weakening of the US dollar during 2019 into which foreign investments are translated.

During the period, the Ministry of Finance together with the BCTL have been able to accomplish the stewardship and fiduciary role for the Petroleum Fund.

SIGNIFICANT CHANGES IN THE STATE OF AFFAIRS

There were no significant changes in the state of affairs of the Petroleum Fund during the year.

APPROVAL OF FINANCIAL STATEMENTS

In the Ministry of Finance opinion, there are reasonable grounds to believe that the Petroleum Fund will be able to pay its debts as and when they become due and payable, and the attached financial statements and notes thereto are in accordance with the Petroleum Fund Law No. 9/ 2005, as amended by Law No. 12/2011, including compliance with accounting standards and giving a true and fair view of the financial position and performance of the Petroleum Fund. The accompanying financial statements for the year ended 31 December 2019 have been approved on behalf of the Ministry of Finance by:

Rui Ferreira Magno

Director General of Treasury

Ministry of Finance Government of Timor-Leste

23 July 2020

Annex II. Audited Financial Statements

Deloitte.

Deloitte Touche Tohmatsu ABN 74 490 121 060

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Independent Auditor's Report to The Ministry of Finance, Democratic Republic of Timor-Leste, in respect of the Petroleum Fund Annual Financial Report for the year ended 31 December 2019

Opinion

We have audited the financial statements of the Petroleum Fund of Timor-Leste (the 'Petroleum Fund'), which comprises the statement of financial position as at 31 December 2019, and the statement of profit or loss and other comprehensive income, statement of changes in capital and statement of cash flows for the year then ended, and notes 1 to 23 to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Petroleum Fund as at 31 December 2019, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Petroleum Fund in accordance with the ethical requirements of the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) that are relevant to our audit of the financial statements. We have also fulfilled our ethical other responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information included in the Petroleum Fund Annual Report. The other information, which does not include the financial statements and our auditor's report thereon, which we received prior to the date of this auditor's report, is comprised of the following:

- The Petroleum Fund at a glance
- · Investments Highlights
- The Fund's Strategic Asset Allocations
- About the Fund
- IAB advice and the fund's going forward
- · Note 24 to the Financial statements
- Annex I. Statement by Director General of Treasury
- Annex III. Statements on accounting policies of the Petroleum Fund for the fiscal year 2019
- Annex IV. Comparison of income derived from the investment of the Petroleum Fund assets with the previous three fiscal years
- Annex V. Comparison of nominal income on the investment of the Petroleum Fund assets with the real returns after adjusting for inflation
- Annex VI. Comparison of nominal income on the investment of the Petroleum Fund assets with the benchmark performance index
- Annex VII. Comparison of the Estimated Sustainable Income for the fiscal year 2019 with the sum of transfers from the Petroleum Fund for the same year
- Annex VIII. Treasury statement on borrowings

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- Annex IX. List of persons holding positions relevant for the operations and performance of the Petroleum Fund
- Annex X. Statement on total withdrawals versus the approved appropriation amount
- Annex XII. Advice provided by the Investment Advisory Board

The other information which is expected to be made available to us after the date of this auditor's report is comprised of the following:

- · the Message from Minister of Finance
- Balance and flows
- · Investment Strategy
- · investment performance in 2019
- · the petroleum fund's investment in Timor gap
- · Annex XIII. TLPF implementation of the Santiago Principles

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed on the other information obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management of the Petroleum Fund is responsible for the preparation and fair presentation of the
financial statements in accordance with IFRSs and for such internal control as management determines
is necessary to enable the preparation of financial statements that are free from material misstatement,
whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Petroleum Fund's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intend to liquidate the Petroleum Fund or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Petroleum Fund's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the ISAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

Identify and assess the risks of material misstatement of the financial statements, whether due
to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit
evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not

detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit
 procedures that are appropriate in the circumstances, but not for the purpose of expressing an
 opinion on the effectiveness of the Petroleum Fund's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Petroleum Fund's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Petroleum Fund to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including
 the disclosures, and whether the financial statements represent the underlying transactions and
 events in a manner that achieves fair presentation.

We communicate with management and those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Deloitte Touche Tohmatsu

Deloitte Touche Tohmatsu

Cheryl Crase Partner

Chartered Accountants Darwin, 23 July 2020

Petroleum Fund of Timor-Leste Statement of profit or loss and other comprehensive income for the year ended 31 December 2019

	Note	Year ended 31/12/2019 USD	Year ended 31/12/2018 USD (restated)
Income			
Interest income	4	259,114,920	201,533,512
Dividend income	5	152,679,195	156,845,144
Trust income	5	6,239,728	6,695,664
Other investment income		47,198	44,100
Net gains/(losses) on financial assets and liabilities at fair value through profit or	6	1,704,662,463	(798,101,156)
loss			
Net foreign exchange gains/(losses)	7	<u>2,027,073</u>	(1,981,220)
Total income/(loss)		2,124,770,577	(434,963,956)
	8		
Expenses			
External management and custody fees	20	(8,501,090)	(9,326,043)
Investment Advisory Board expenses	20	(248,195)	(256,871)
BCTL operational management fees	20	(5,074,140)	(5,073,803)
Other expenses	20	(1,015,865)	(844,652)
Total expenses		(14,839,290)	(15,501,369)
Profit/(loss) before tax		2,109,931,287	(450,465,325)
Withholding taxes	9	(9,007,444)	(9,455,396)
Profit/(loss) for the year		2,100,923,843	(459,920,721)
Other comprehensive income		<u> </u>	· · · · · · ·
Total comprehensive income/(loss) for the year		2,100,923,843	(459,920,721)

Petroleum Fund of Timor-Leste Statement of financial position as at 31 December 2019

Assets	Note	As at 31/12/2019 USD	As at 31/12/2018 USD
Cash and cash equivalents	11	940,852,534	725,098,971
Other receivables	12	32,565,093	25,799,760
Financial assets at fair value through profit or loss Financial assets at amortized cost	14,15 13	16,064,676,259 671,313,500	15,072,095,909 =
Total assets		17,709,407,386	15,822,994,640
Liabilities			
Payables for securities purchased		14,279,912	16,645,556
Accounts payable		<u>3,311,041</u>	2,710,962
Total liabilities		17,590,953	19,356,518
Net assets		<u>17,691,816,433</u>	15,803,638,122
Capital			
Capital		<u>17,691,816,433</u>	<u>15,803,638,122</u>

Petroleum Fund of Timor-Leste Statement of changes in capital for the year ended 31 December 2019

	Note	Year ended 31/12/2019 USD	Year ended 31/12/2018 USD
Capital at the beginning of the year		15,803,638,122	16,799,312,691
Petroleum Fund gross receipts	16	756,254,468	510,080,813
(pursuant to Article 6 of the Petroleum Fund Law)		<u>16,559,892,590</u>	<u>17,309,393,504</u>
Transfers to the Consolidated Fund of Timor-Leste	16	(969,000,000)	(982,500,000)
(pursuant to Article 7 of the Petroleum Fund Law)			
Transfers for refunds of taxation	16	-	(63,334,661)
(pursuant to Article 10 of the Petroleum Fund Law)			
Total comprehensive income/(loss) for the year		2,100,923,843	(459,920,721)
Capital at the end of the year		17,691,816,433	15,803,638,122

Petroleum Fund of Timor-Leste Statement of cash flows for the year ended 31 December 2019

	Note	Year ended 31/12/2019 USD	Year ended 31/12/2018 USD
Cash flows from operating activities Proceeds from sale and maturities of financial assets at fair value through profit or loss	14	12,958,725,951	11,126,986,929
Purchases of financial assets at fair value through profit or loss Interest received Dividends received Trust distributions received External management and custody fees paid	14	237,405,872 144,726,403 6,150,969 (13,223,346)	149,341,720 7,118,526 (14,070,670)
Other operating receipts Other operating payments Net cash from operating activities	17	47,196 (1,015,865) 1,078,044,932	44,084 (844,652) 946,875,790
Cash flows from investing activities Purchases of financial assets at amortized cost Net cash utilized in investing activities	13	(650,000,000) (650,000,000)	<u>=</u> =
Cash flows from financing activities Petroleum Fund gross receipts Transfer payments to the Consolidated Fund of Timor-Leste Refunds of tax receipts Net cash flows utilized in financing activities	16 16 16	756,254,468 (969,000,000) = (212,745,532)	510,080,813 (982,500,000) (63,334,661) (535,753,848)
Net increase in cash and cash equivalents		215,299,400	411,121,942
Cash and cash equivalents at the beginning of the year Effects of foreign currency exchange rate changes on cash and cash equivalents		725,098,971 <u>454,163</u>	318,007,230 (4,030,201)
Cash and cash equivalents at 31 December	11	940,852,534	725,098,971

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SCHEDULE OF FINANCIAL ASSETS
Schedule of financial assets valued through profit or loss

PART VII

34 34

PART I: INTRODUCTION

1. Fund information

The Petroleum Fund of Timor-Leste ("Petroleum Fund") was established under the provisions of the Petroleum Fund Law No. 9/2005 as amended by Law No. 12/2011 on 28 September 2011.

The investment strategy and benchmarks of the Petroleum Fund are determined by the Ministry of Finance based on advice from the Investment Advisory Board (IAB).

The Banco Central de Timor-Leste (BCTL) having its office at Avenida Xavier do Amaral, no. 9, Dili, Timor-Leste, is responsible for the operational management of the Petroleum Fund and is the registered owner of all the assets of the Petroleum Fund. The management of the Petroleum Fund is undertaken according to a Management Agreement between the Ministry of Finance and the BCTL.

The Petroleum Fund's objective is to meet benchmark returns on its capital within the risk limit provided in mandates and within the limits established in Articles 14 and 15 of the Petroleum Fund Law relating to Investment Policy and Investment Rules.

The Petroleum Fund's investment portfolio of assets at fair value through profit or loss (including cash and cash equivalents) complied with the legislative and contractual requirements throughout the period.

These financial statements were authorized for issue by the Director General of Treasury on 23 July 2020.

2. Statement of compliance with IFRS

In accordance with Article 21 of the Petroleum Fund Law, the financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) (formerly: "International Accounting Standards").

The Petroleum Fund has adopted the IFRS that were applicable during the year under review.

Information about the impact of new and forthcoming IFRS on these financial statements is provided in Note 22.

3. Basis of preparation

Items included in the Petroleum Fund's financial statements are measured and presented in United States dollars, being the functional and official currency of the Democratic Republic of Timor-Leste.

The financial statements are prepared on the historical cost basis, except for certain financial investments that are measured at fair value through profit or loss, as explained in the accounting policies described herein.

The accounting policies have been consistently applied by the Petroleum Fund.

Estimates and judgements

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expense. The estimates and associated assumptions are based on historical experience and other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying values and assets and liabilities that are not readily apparent from other sources. Estimates use observable data to the extent practicable. However, areas such as potential market changes, credit risk, volatilities and correlations require management to make estimates that could affect the reported fair value of financial instruments. Actual results may therefore vary from these estimates. This process involves a high degree of judgement or complexity.

Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision, and future periods if the revision affects both current and future periods.

Assumptions and estimates that are significant to the financial statements are disclosed in the relevant notes, as are the judgements made by management which have a significant effect on the amounts recognized in the financial statements.

PART II: NOTES TO THE STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

The statement of profit or loss and other comprehensive income, also known as the profit & loss account, is a report of income, expenses and the resulting profit or loss earned by the Petroleum Fund during the period from 1 January to 31 December each year.

The concept of income encompasses both revenue and gains. Revenue arises in the course of the normal activities of the Petroleum Fund and is referred to by a variety of names, including interest and dividends. Gains represent increases in economic benefits and include both realized and unrealized gains, including the revaluation of marketable securities and foreign exchange.

The concept of expenses encompasses losses as well as those expenses that arise in the course of the ordinary activities of the Petroleum Fund.

Other comprehensive income includes items of income or expense (including reclassification adjustments) that are not recognized in profit or loss as required or permitted by IFRS.

4. Interest income

Interest income is derived from the Petroleum Fund's investments in fixed interest securities, cash balances and short-term cash investments.

	Year ended 31/12/2019	Year ended 31/12/2018
	USD	USD
Interest from Fixed interest securities at amortized cost	21,313,500	-
Interest from Fixed interest securities at fair value through profit or loss	212,603,746	186,942,102
Interest from cash and cash equivalents	25,197,674	14,591,410
	259,114,920	201,533,512

Accounting policy

Interest income is accrued on a time basis, by reference to the principal outstanding and at the interest rate applicable. It is recognized in the statement of profit or loss and other comprehensive income and shown separately from other fair value movements.

5. Dividends and trust income

Dividends received are distributions from the Petroleum Fund's holding of equities and represent the Petroleum Fund's share of profits paid out to shareholders. Trust income is similar to dividends but is derived from the Petroleum Fund's investments in real estate entities that are incorporated as Real Estate Investment Trusts.

	Year ended 31/12/2019	Year ended 31/12/2018
	USD	USD
Dividend income	152,679,195	156,845,144
Trust income	6,239,728	6,695,664
	<u> 158,918,923</u>	163,540,808

Accounting policy

Dividend income from investments and unit trust distribution income are recognized when the shareholder's right to receive payment has been established. Dividend income and unit trust distributions are presented gross of any non-recoverable withholding taxes and are disclosed separately in the statement of profit or loss and other comprehensive income.

6. Gain or loss on financial assets and liabilities at fair value through profit or loss

This item includes changes in the fair value of financial assets and liabilities held for trading or designated upon initial recognition as 'at fair value through profit or loss' and excludes interest and dividend income and expenses. These changes arise from changes in the market value of the financial investments (or liabilities) held by the Petroleum Fund.

 Year ended
 Year ended

 31/12/2019
 31/12/2018

 USD
 USD

 (restated)

 1,704,662,463
 (798,101,156)

Net gains/(losses) on financial assets and liabilities at fair value through profit or loss

Restatement of 2018 comparative figure

During 2019 a review was made of the gain or loss on financial assets and liabilities denominated in foreign currencies to determine how much was due to movements in market prices and how much was due to movements in exchange rates. As an outcome of that review it was found necessary to adjust the split shown in the Petroleum Fund's annual financial statements for 2018 to provide a fairer presentation of the figures.

The restatement has no effect on the financial outcome for the 2018 year, being a presentation adjustment of \$155,406,832 to increase the Net gains/(losses) on financial assets and liabilities at fair value through profit or loss and decrease the net foreign exchange loss.

The effect of the restatement on the comparative figures is as follows:

	Comparative in 2019 financial statements USD	2018 financial statements as published USD
Net gains/(losses) on financial assets and liabilities at fair value through profit or	(798,101,156)	(642,694,324)
loss Net foreign exchange gains/(losses)	(1,981,220) (800,082,376)	(157,388,052) (800,082,376)

Accounting policy, estimates, assumptions, judgements and risks

See Note 14 which sets out information that relates to this item:

- details of the accounting policies relating to gains and losses on financial assets and liabilities designated as 'at fair value through profit or loss',
- the significant judgements and estimates that have been made and may be material in determining the reported gain or loss on financial assets and liabilities,
- · the risks associated with holding financial assets and liabilities that may impact on the reported profit or loss, and
- an analysis of the sensitivity to changes in future market conditions that may give rise to gains or losses on financial assets and liabilities.

7. Foreign exchange gain or loss

Foreign exchange gains and losses arise when the Petroleum Fund invests in assets (except for those arising on financial instruments measured at fair value through profit or loss in accordance with IFRS 9) denominated in a currency other than the US dollar (the Petroleum Fund's functional currency). When the US dollar strengthens relative to another currency in which the Petroleum Fund holds assets, the Petroleum Fund will report a foreign exchange loss. Conversely, if the Petroleum Fund holds an asset denominated in a currency other than US dollars, and that currency strengthens, the Petroleum Fund will report a foreign exchange gain.

Year ended	Year ended
31/12/2019	31/12/2018
USD	USD
	(restated)
2,027,073	(1,981,220)

Net foreign exchange gains/(losses)

Restatement of 2018 comparative figure

The 2018 comparative figure for the net foreign exchange loss has been restated from \$157,388,052 (as published in the 2018 financial statements) to \$1,981,220. Details relating to this restatement are provided in Note 6.

7. Foreign exchange gain or loss (continued)

Accounting policy

Foreign currency transactions are translated into the functional currency (US dollars) using the exchange rates prevailing at the dates of transactions. Foreign currency assets and liabilities are translated into the functional currency using the exchange rate prevailing at the statement of financial position date.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year end exchange rates of monetary and other financial assets and liabilities denominated in foreign currencies are disclosed in the statement of profit or loss separately from market gains/losses on those financial instruments as 'Net foreign exchange gains/(losses)' except for, financial assets and liabilities denominated in foreign currencies held at fair value through profit or loss, which are recognised in the statement of profit or loss and other comprehensive income part of net gains/(losses) on financial assets and liabilities at fair value through profit or loss for the investments measured at fair value through profit or loss.'

8. Expenses

In accordance with the provisions of the Petroleum Fund Law, all expenses of the Petroleum Fund other than the external audit fee (which is met from the state budget), not relating to the purchase or sale of securities and recognized in the sale or purchase price, are met by the BCTL and are covered by a management fee. This management fee is legally a deduction from the gross receipts of the Petroleum Fund (Art 6.3 of Petroleum Fund Law), although it is recognized as an expense in the statement of profit or loss and other comprehensive income.

Expenses which are incidental to the acquisition of an investment are included in the cost of that investment.

Expenses that are incidental to the disposal of an investment are deducted from the disposal proceeds of the investment.

9. Taxation

The Petroleum Fund is exempt from all forms of taxation in Timor-Leste. Therefore, the Petroleum Fund has a statutory tax rate of 0%

Investment income and capital gains are subject to withholding tax in certain foreign jurisdictions and are the only items subject to taxation

In the current year tax has been withheld from foreign dividend, unit trust income and interest received according to the applicable laws. Relief from withholding tax is available on application in some of these jurisdictions.

Accounting policy

Income of the Petroleum Fund earned in foreign jurisdictions subject to withholding taxes levied in those jurisdictions is recorded gross of withholding taxes in the statement of profit or loss and other comprehensive income. Withholding taxes, to the extent that they are not recoverable, are shown as a separate line item in the statement of profit or loss and other comprehensive income.

Critical accounting estimates, assumptions and judgements

Uncertainties exist with respect to the interpretation of complex tax regulations and changes in tax laws on income derived in foreign jurisdictions and the recoverability of amounts withheld. Given the wide range of international investments, differences arising between the actual investment income and the assumptions made, or future changes to such assumptions, could necessitate future adjustments to tax expense already recorded. The Petroleum Fund establishes provisions, based on reasonable estimates, for possible consequences of audits by the tax authorities of the respective countries in which it invests. The amounts of such provisions (as per note 12) are based on various factors, such as experience of previous tax audits and differing interpretations of tax regulations by the taxable entity and the responsible tax authority. Such differences of interpretation may arise on a wide variety of issues depending on the conditions prevailing in the respective investment's domicile. As the Petroleum Fund assesses the probability for litigation and subsequent cash outflow with respect to taxes as remote, no contingent liability has been recognized.

PART III: NOTES TO THE STATEMENT OF FINANCIAL POSITION

The statement of financial position, also known as the balance sheet, presents the financial position of the Petroleum Fund as at the end of its financial year, 31 December. The statement of financial position comprises three main components: assets, liabilities and capital.

An asset is something that the Petroleum Fund owns or controls in order to get economic benefits from its use. The main assets of the Petroleum Fund are bonds and equities (shares).

A liability is an obligation that the Petroleum Fund owes to another party which in normal circumstances is settled in cash or other financial resources.

The capital is the net wealth of the Petroleum Fund that belongs to its owner, the Democratic Republic of Timor-Leste.

The statement of financial position presents assets and liabilities in decreasing order of liquidity and does not distinguish between current and non-current items.

10. Risk management

The Petroleum Fund's overall risk management programme seeks to maximize the returns derived for the level of risk to which the Petroleum Fund is exposed and seeks to minimize potential adverse effects on the Petroleum Fund's performance. Specific risks are managed as follows:

10.1. Financial risk

The Petroleum Fund's activities expose it to a variety of financial risks, being market risk (including equity price risk, interest rate risk and currency risk), credit risk, settlement risk and liquidity risk.

The financial risks associated with the Petroleum Fund are monitored by the Risk Management Division of the Petroleum Fund Management Department at the BCTL which prepares daily management reports for senior management and quarterly reports for the Ministry of Finance. The Petroleum Fund is subject to periodic audit by the Internal Audit Office of the BCTL which has operational independence from the management of the Petroleum Fund. The Internal Audit Office provides formal monthly reports to the Governor and half-yearly reports to the Governing Board of the BCTL.

10.2. Market risk

Market risk is the risk that movements in market factors, such as foreign exchange rates, interest rates, credit spreads, equity prices and commodity prices, will reduce the Petroleum Fund's income or the value of its portfolios.

The objective of managing this risk is to manage and control market exposures, including for example the use of conservative benchmarks and tracking error in manager mandates, in order to optimize return on risk while ensuring solvency.

10.3. Credit risk

Credit risk is the risk that the issuer of a debt instrument is not able to repay the principal and/or interest on the due dates.

The Petroleum Fund manages the credit risk associated with private debt instruments by requiring issuers to comply with covenants, including amongst other things requirements for the issuer to provide regular financial and cash flow statements, and to maintain accumulated cash flow projections well in excess of outstanding repayments of principal and interest.

10.4. Liquidity risk

Liquidity risk is the risk that the Petroleum Fund may not be able to generate sufficient cash resources to settle its obligations which would primarily be to fund the State budget account, in full, or can only do so on terms that are materially disadvantageous.

To manage this risk, the Ministry of Finance has agreed in the Management Agreement to provide the Central Bank with a forecast of the future cash requirements of the government, including the projected timings and amounts to be transferred from the Petroleum Fund.

Liabilities at the year-end were US\$17.6 million (2018: US\$19.4 million) and consists of payables for securities purchased but not settled at the year end and management fees payable. These are expected to be settled within 30 days of the year end but are not considered to create a liquidity risk for the Petroleum Fund due to available cash which is sufficient to cover these liabilities. The Central Bank monitors the Petroleum Fund's liquidity position on a daily basis. Where there are potential shortfalls, financial assets will be sold to meet anticipated shortfall. The Petroleum Fund invests primarily in marketable securities and other financial instruments which, under normal market conditions and except for financial assets carried at amortized cost, are readily convertible to cash.

10. Risk management (continued)

10.5. Settlement risk

The financial activities of the Petroleum Fund may give rise to risk at the time of settlement of transactions. Settlement risk is the risk of loss due to the failure of an entity to honor its obligations to deliver cash, securities or other assets as contractually agreed. For the majority of transactions, the Petroleum Fund mitigates this risk by requiring the custodian to conduct settlements on a delivery versus payment basis, whereby a trade is settled only when both parties have fulfilled their contractual settlement obligations by delivering the agreed amounts of cash or financial assets. The settlement will fail if either party fails to meet its obligation.

11. Cash and cash equivalents

The Petroleum Fund has a number of bank accounts in which it holds cash. Surplus cash is invested in overnight markets with banks or through reverse repurchase agreements which may be thought of as secured overnight deposits.

	As at	As at
	31/12/2019	31/12/2018
	USD	USD
Cash at bank	117,952,534	99,098,971
Overnight reverse repurchase agreements	822,900,000	626,000,000
	940,852,534	725,098,971

Accounting policy

Cash comprises current deposits with banks which have maturities of less than 90 days. Cash equivalents are short term highly liquid investments that are readily convertible to known amounts of cash, are subject to an insignificant risk of changes in value and are held for the purpose of meeting short term cash commitments rather than for investment or other purposes.

Securities purchased under agreements to resell (reverse repurchase agreements) with a maturity period of greater than one financial day are reported not as purchases of securities but as receivables and are carried in the statement of financial position at amortized cost.

Interest earned on reverse repurchase agreements is recognized as interest income over the life of each agreement using the effective interest method.

Risks

Cash and cash equivalents are not subject to market or interest rate risk. Credit risk is managed by holding cash at financial institutions with a high reputation – the Federal Reserve Bank of New York with a Standard & Poor's rating of AA+ (very strong capacity to meet its financial commitments) and JPMorgan Chase Bank N.V. with a Standard & Poor's short-term issuer rating of A-2 (susceptible to adverse economic conditions however the obligor's capacity to meet its financial commitment on the obligation is satisfactory).

12. Other receivables

Other receivables are financial assets that are classified as loans and receivables including cash balances due from financial intermediaries from the sale of securities, receivables from reverse repurchase agreements with a maturity of more than one business day and other short term loans and receivables including accruals for investment income receivables.

	31/12/2019	31/12/2018
	USD	USD
Dividends receivables	6,086,293	6,893,741
Withholding tax receivables	16,519,470	14,638,778
Trust distributions receivables	935,086	941,910
Due from brokers receivables	8,791,368	2,935,125
Interest receivables	232,867	390,197
Other receivables	9	9
	32,565,093	25,799,760

As at

As at

12. Other receivables (continued)

Accounting policy

Loans and receivables (other than those classified as held for trading) are measured initially at their fair value plus any directly attributable incremental costs of acquisition or issue and subsequently measured at amortized cost.

Impairment of financial assets

The Petroleum Fund monitors all financial assets that are subject to the IFRS impairment requirements to assess whether there has been a significant increase in credit risk since initial recognition. If there has been a significant increase in credit risk the Petroleum Fund will measure the loss allowance based on lifetime rather than 12-month ECL. The Petroleum Fund's accounting policy is not to use the practical expedient that financial assets with 'low' credit risk at the reporting date are deemed not to have had a significant increase in credit risk. As a result the Petroleum Fund monitors all financial assets that are subject to impairment for significant increase in credit risk.

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Petroleum Fund compares the risk of a default occurring on the financial instrument at the reporting date based on the remaining maturity of the instrument with the risk of a default occurring that was anticipated for the remaining maturity at the current reporting date when the financial instrument was first recognized. In making this assessment, the Petroleum Fund considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

At 31 December 2019 and 31 December 2018, all other receivables, amounts due from brokers, cash and short-term deposits are held with counterparties with a credit rating of AA/Aa or higher and are due to be settled within 1 week. Management consider the probability of default to be close to zero as the counterparties have a strong capacity to meet their contractual obligations in the near term. As a result, no loss allowance has been recognised based on 12-month expected credit losses as any such impairment would be wholly insignificant to the Fund.

Risks

Receivables, other than recoverable withholding taxes, are subject to minimal risk and are generally paid within a short timeframe in the normal course of business.

The recovery of withholding tax receivables is dependent on processing and approval by the relevant tax authorities.

13. Financial assets carried at amortized cost

Financial assets carried at amortized cost are certain private debt instruments issued by subsidiaries of Timor Gap Lda in relation to the purchase in April 2019 of participating interests and rights in the Greater Sunrise oil and gas field by the Democratic Republic of Timor-Leste.

The debt instruments carry a coupon rate of 4.5% and are repayable over a period of 18 years with a repayment grace period of 8 years.

As at balance date the outstanding principal and accrued interest on the debt instruments was as follows:

	215 44	115 44
	31/12/2019	31/12/2018
	USD	USD
Principal	650,000,000	-
Accrued interest	21,313,500	
	<u>671,313,500</u>	

The carrying values of the Timor Gap assets carried at amortized cost are a reasonable approximation of fair value.

Accounting policy

Initial recognition

On initial recognition, the Petroleum Fund classifies a financial asset as carried at amortized cost if both the following conditions are met and if it is not designated as Fair Value Through Profit or Loss:

- it is held within a business model whose objective is to hold the asset to collect the contractual cash flows; and
- its contractual terms give rise on specific dates to cash flows that are solely repayments of principal and interest on the principal amount outstanding.

As at

13. Financial assets carried at amortized cost (continued)

Subsequent measurement

The amortized cost of a financial asset is the amount at which the financial asset is measured on initial recognition minus the principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance.

Impairment

At the reporting date the Petroleum Fund recognizes loss allowances for lifetime expected credit losses if the credit risk on a financial instrument measured at amortized cost has increased significantly since initial recognition otherwise a 12-month ECL is recognized and revised each reporting period. When determining whether the credit risk of a financial asset has increased significantly since initial recognition when estimating expected credit losses, the Petroleum Fund considers reasonable and supportable information that is relevant and is available without undue cost or effort. This includes both qualitative and quantitative information and analysis based on historical experience and forward-looking information.

The Petroleum Fund assumes that the credit risk on a financial asset carried at amortized cost may have increased significantly if the issuer is in breach of the covenants associated with the debt instrument. More particularly, the Petroleum Fund may consider a financial asset carried at amortized cost as credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred. Evidence that a financial asset is credit-impaired includes the following observable data:

- significant financial difficulty of the issuer
- a breach of contract such as a default
- a significant breach of the financial asset's covenants
- it is probable that the issuer will enter bankruptcy or other financial reorganization.

Risks

The private debt instruments owned by the Petroleum Fund have been issued by subsidiaries of Timor Gap Lda on the assumption that the cash flows from their investments in the Greater Sunrise oil and gas field will exceed the cost of the rights purchased and subsequent development costs. There are risks that:

- the cash flows from Timor Gap's share of oil and gas revenues may not be large enough to meet the contractual repayments of principal and/or interest; or
- the anticipated cash flows from oil and gas revenues may not materialize within the time frame assumed by the grace period; or
- other events may occur that impact the ability of the issuers to make the agreed repayments at the agreed times.

The Petroleum Fund has established procedures for regular reviews of the issuers' financial forecasts, covenants and other information that collectively provide an "early warning system" that the probability of one or more of these risks materializing may have increased.

The Timor Gap private debt instruments are denominated in US dollars. As a result, there is no exposure to foreign currency risk. There is also no exposure to price risk because the investments will be held to maturity.

14. Financial assets at fair value through profit or loss

The Petroleum Fund invests in a range of financial instruments in order to generate income. The investments include equities (shares) and fixed interest (bonds) and a limited number of derivative instruments.

Typically, derivative contracts serve as components of the Petroleum Fund's investment strategy and are utilized primarily to structure and hedge investments, to enhance performance and reduce risk to the Petroleum Fund (the Petroleum Fund does not designate any derivative as a hedging instrument for hedge accounting purposes).

The Petroleum Fund uses derivative financial instruments to economically hedge its risks associated with foreign currency fluctuations. Additionally, derivative financial instruments may also be used for trading purposes where the investment manager believes this would be more efficient than investing directly in the underlying financial instruments. Derivatives often reflect, at their inception, only a mutual exchange of promises with little or no transfer of tangible consideration. However, these instruments frequently involve a high degree of leverage and are very volatile. A relatively small movement in the underlying of a derivative contract may have a significant impact on the profit or loss of the Petroleum Fund. Over the counter ("OTC") derivatives may expose the Petroleum Fund to the risks associated with the absence of an exchange market on which to close out an open position. Investment managers are instructed to closely monitor the Petroleum Fund's exposure under derivative contracts as part of the overall management of the Petroleum Fund's market risk.

14. Financial assets at fair value through profit or loss (continued)

The Minister of Finance has approved the use of equity index futures, bond and interest rate futures and currency forward contracts under Annex 1, Amendment Number 9, 19 May 2017 of the Management Agreement between the Minister and the BCTL.

A summary of financial assets held at financial position date is as follows:

	As at 31/ US	,,	As at 31/12/2018 USD		
Designated as at fair value through profit or loss	Fair value	% of investment/ asset allocation	Fair value	% of net assets	
Fixed interest securities					
United States treasury notes	7,913,988,405	50	7,399,772,981	49	
Australian government bonds	160,769,292	1	170,978,233	1	
Japanese government bonds	153,334,562	1	167,139,449	1	
United Kingdom government bonds	163,907,059	1	167,476,329	1	
European government bonds	786,350,122	5	730,229,241	5	
Other government bonds	343,804,473	2	318,411,193	2	
Total fixed interest securities	9,522,153,913	60	8,954,007,426	59	
Equity securities	_				
United States equities	4,102,660,412	26	3,771,002,613	25	
Australian equities	162,194,140	1	178,197,094	1	
Japanese equities	540,171,666	3	514,885,550	4	
United Kingdom equities	375,190,835	2	373,888,257	3	
European equities	1,020,485,247	6	966,407,558	6	
Equities from other countries	340,980,159	2	314,268,183	2	
Total equity securities	6,541,682,459	40	6,118,649,255	41	
Held for trading					
Derivatives					
United States equity futures	1,065,700	-	(1,352,983)	-	
Foreign currency forward contracts	(225,813)		792,211	<u>-</u>	
Total derivatives	839,887		(560,772)		
Total securities	16,064,676,259		15,072,095,909		

Transactions in financial assets which arise either from the investment of new funds, the periodic rebalancing of the investment portfolio or sales to generate cash for budgetary transfers, are summarized as follows:

	As at	As at
	31/12/2019	31/12/2018
	USD	USD
Financial assets at fair value through profit or loss		
Opening fair value	15,072,095,909	16,462,177,711
Purchases at cost	12,252,807,806	10,529,499,230
Proceeds from sales	(12,270,902,101)	(11,048,928,272)
Net gains/(losses) on financial assets at fair value through profit	1,010,674,645	(870,652,760)
or loss		
Closing fair value	16,064,676,259	15,072,095,909

14. Financial assets at fair value through profit or loss (continued)

The following table provides an analysis of financial instruments that are measured subsequent to initial recognition at fair value, grouped into levels 1 to 3 (see accounting policies below for definitions of the levels) based on the degree to which the fair value is observable.

		As at 31/1 US		
	Quoted market	Valuation technique: market observable inputs	Valuation technique: non-market observable inputs	
Financial assets	(Level 1)	(Level 2)	(Level 3)	Total
Financial instruments designated at fair value through profit or loss				
Derivatives	1,065,700	-	-	1,065,700
Equity securities Fixed interest securities	6,541,682,459 9,522,153,913	-	-	6,541,682,459 9,522,153,913
Total	16,064,902,072			
Financial liabilities Financial instruments designated at fair value through				
profit or loss				
Derivatives Total		(225,813) (225,813)		(225,813) (225,813)
1 Otal		(225,813)	 -	(225,813)
		As at 31/1 USA	D	
	Quoted market price	USA Valuation technique: market observable inputs	Valuation technique: non-market observable inputs	
Financial assets Financial instruments designated at fair value through		USA Valuation technique: market observable	Valuation technique: non-market observable	Total
Financial instruments designated at fair value through profit or loss	price	USA Valuation technique: market observable inputs (Level 2)	Valuation technique: non-market observable inputs	
Financial instruments designated at fair value through profit or loss Derivatives Equity securities	price	USA Valuation technique: market observable inputs	Valuation technique: non-market observable inputs	792,211 6,118,649,255
Financial instruments designated at fair value through profit or loss Derivatives Equity securities Fixed interest securities	price (Level 1) - 6,118,649,255 8,954,007,426	VSI Valuation technique: market observable inputs (Level 2)	Valuation technique: non-market observable inputs (Level 3)	792,211 6,118,649,255 8,954,007,426
Financial instruments designated at fair value through profit or loss Derivatives Equity securities	price (Level 1)	USA Valuation technique: market observable inputs (Level 2)	Valuation technique: non-market observable inputs (Level 3)	792,211 6,118,649,255
Financial instruments designated at fair value through profit or loss Derivatives Equity securities Fixed interest securities	price (Level 1) - 6,118,649,255 8,954,007,426	VSI Valuation technique: market observable inputs (Level 2)	Valuation technique: non-market observable inputs (Level 3)	792,211 6,118,649,255 8,954,007,426
Financial instruments designated at fair value through profit or loss Derivatives Equity securities Fixed interest securities Total Financial liabilities Financial instruments designated at fair value through	price (Level 1) - 6,118,649,255 8,954,007,426	VSI Valuation technique: market observable inputs (Level 2) 792,211	Valuation technique: non-market observable inputs (Level 3)	792,211 6,118,649,255 8,954,007,426

There were no transfers between levels for the year ended 31 December 2019 (2018: nil).

There were no movements in all levels of instruments for the year ended 31 December 2019 (2018: nil).

A detailed schedule of financial assets at fair value through profit or loss is at Note 24.

14. Financial assets at fair value through profit or loss (continued)

The following table sets out the fair values and notional amounts of derivative assets and liabilities held by the Petroleum Fund as at the reporting date.

	As at 31/	/12/2019	As at 31/12/2018		
Derivative financial instruments	Fair value USD	Notional value USD	Fair value USD	Notional value USD	
Equity futures	1,065,700	13,912,141	(1,352,983)	31,550,200	
Foreign currency forward contracts	(225,813)	(249,592)	792,211	(9,854,558)	
Total	839,887	13,662,549	(560,772)	21,695,642	

Accounting policies

Recognition

The Petroleum Fund recognizes a financial asset or a financial liability when, and only when, it becomes a party to the contractual provisions of the instrument.

As the Petroleum Fund's publicly traded financial assets are held within a business model whose objective is not to hold financial assets in order to collect contractual cash flows; or is achieved by both collecting contractual cash flows and selling the financial assets, all publicly traded financial assets are measured subsequently at fair value through profit or loss (FVTPL).

Purchases or sales of financial assets that require delivery of assets within the time frame generally established by regulation or convention in the marketplace (regular way trades) are recognized on the trade date, i.e., the date that the Petroleum Fund commits to purchase or sell the asset.

Financial assets and liabilities (initial measurement)

Financial assets and financial liabilities at fair value through profit or loss are recorded in the statement of financial position at fair value. All transaction costs for such instruments are recognized directly in profit or loss.

Derivatives embedded in other financial instruments are treated as separate derivatives and recorded at fair value if their economic characteristics and risks are not closely related to those of the host contract and the host contract is not itself classified as held for trading or designated as at fair value through profit or loss. Embedded derivatives separated from the host are carried at fair value with changes in fair value recognized in profit or loss.

Subsequent measurement

Financial assets and financial liabilities at fair value through profit or loss are recorded in the statement of financial position at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of financial instruments is based on their quoted market prices at the statement of financial position date without any deduction for estimated future selling costs. Financial assets held or a liability to be issued are priced at current bid prices, while financial liabilities held and assets to be acquired are priced at current asking prices.

All changes to fair value, other than interest or dividend income, are recognized in the profit or loss as part of net gain from financial assets or liabilities at fair value through profit or loss. Accrued interest and dividend income is presented separately from other fair value movements in the statement of profit or loss.

Derecognition

A financial asset (or, where applicable, a part of a financial asset or a part of a group of similar financial assets) is derecognized when:

- Either the rights to receive cash flows from the asset have expired, or the Petroleum Fund has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass through' arrangement, and
- Either (a) the Petroleum Fund has transferred substantially all the risks and rewards of the asset or (b) the Petroleum Fund has neither transferred nor retained substantially all the risks and rewards of the asset but has transferred control of the asset.

14. Financial assets at fair value through profit or loss (continued)

When the Petroleum Fund has transferred its rights to receive cash flows from an asset (or has entered into a pass through arrangement) and has neither transferred nor retained substantially all of the risks and rewards of the asset nor transferred control of the asset, the asset is recognized to the extent of the Petroleum Fund's continuing involvement in the asset. In that case, the Petroleum Fund also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Petroleum Fund has retained.

The Petroleum Fund derecognizes a financial liability when the obligation under the liability is discharged, cancelled or expired.

Offsetting

The Petroleum Fund offsets financial assets and financial liabilities if the Petroleum Fund has a legally enforceable right to set off the recognized amounts and interests and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

Income and expenses are presented on a net basis only when permitted under IFRS.

Critical accounting estimates

The manner in which assets are valued can have a material effect on the financial position and profit of the Petroleum Fund. In order to assess the reliability and objectivity of the valuation process, the Petroleum Fund categorizes the method of valuation into three levels, as follows:

- Level 1 (Quoted market price) fair value measurements are those derived from quoted prices in active markets for identical assets or liabilities. The Petroleum Fund does not adjust the quoted prices for these instruments.
- Level 2 (Valuation technique: market observable inputs) fair value measurements are those derived from inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices). As level 2 investments include positions that are not traded in active markets and/or subject to transfer restrictions, valuations may be adjusted to reflect illiquidity and/or non-transferability which are generally based on available market information.
- Level 3 (Valuation technique: non-market observable inputs) fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

Risks

(a) Market risk

Market risk is the risk that changes in market prices, such as interest rates, equity prices, foreign exchange rates and credit spreads (not relating to changes in the obligor's/issuer's credit standing) will affect the Petroleum Fund's income or fair value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

The maximum risk resulting from financial instruments equals their fair value.

The Petroleum Fund's strategy for the management of market risks is driven by the Petroleum Fund's investment objectives, including diversification of its investment portfolio, by specifying benchmarks in individual investment mandates with risk limits defined by maximum or target tracking errors.

The Petroleum Fund's market risk is thus managed on a regular basis by the investment managers in accordance with these investment mandates.

(i) Equity price risk

Equity price risk is the risk of unfavorable changes in the fair values of equities or equity linked derivatives as the result of changes in the levels of equity indices and the value of individual shares. The equity price risk exposure arises from the Petroleum Fund's investments in equity securities and from equity linked derivatives. The Petroleum Fund manages this risk by investing in a variety of stock exchanges and by limiting exposure to any one company or issuing entity, excluding sovereign states, to 3% of net assets (consistent with Article 15.5a of the Petroleum Fund Law). The Petroleum Fund Law limits equity investments to no more than 5% of the share capital of a particular issuer (consistent with Article 15.3b of the Petroleum Fund Law).

Management's best estimate of the effect on the profit or loss for a year due to a reasonably possible change in equity indices, with all other variables held constant is indicated in the table below. There is no effect on 'other comprehensive income' as the Petroleum Fund has no assets classified as 'available for sale' or designated hedging instruments. In practice, the actual trading results may differ from the sensitivity analysis below and the difference could be material. An equivalent decrease in each of the indices shown below would have resulted in an equivalent, but opposite, impact.

14. Financial assets at fair value through profit or loss (continued)

The Petroleum Fund manages its exposure to equity price risk by analyzing the portfolio by industrial sector and country each month and benchmarking the performance of each sector/country to the MSCI World Index by considering the performance of the Petroleum Fund attributable to stock allocation, security selection and the interaction effect.

The following table summarizes the sensitivity of the Petroleum Fund's operating profit and net assets to price risk. The analysis is based on reasonably possible movements in the benchmark with all other variables held constant and the fair value of the Petroleum Fund's portfolio moving according to the movement in the benchmark. The reasonably possible movements in the risk variables have been determined based on the investment managers' best estimates having regard to a number of factors including historical levels of changes in market index, security prices and/or benchmark returns and interest rates. However, actual movements in the risk variables may be greater or less than anticipated due to a number of factors, including unusually large market shocks resulting from changes in the performance of the economies, markets and securities to which the variable is exposed. As a result, historic variations in risk variables are not a definitive indicator of future variations in the risk variables. The table below shows the impact on operating profit/net assets resulting from a 10% change in the price of equities.

	Price	risk
	Impact on profit/(loss) f	for the year / Net assets
	(-10.00%)	(+10.00%)
31 December 2019	(654,252,235)	654,252,235
31 December 2018	(611,808,848)	611,808,848

The Petroleum Fund has determined that a fluctuation in equity prices of 10% is reasonably possible within a one year period based on historical movements in global equity markets.

(ii) Interest rate risk

Interest rate risk arises from the possibility that an investment's fair value or associated future cash flows will change due to a change in the absolute level of interest rates, in the spread between two rates, in the shape of the yield curve or in any other interest rate relationship.

The majority of interest rate exposure arises on investments in Fixed interest securities in the United States of America and, to a lesser extent, the rest of the developed world. Most of the Petroleum Fund's investments in Fixed interest securities carry fixed interest rates and mature within ten years.

The Petroleum Fund manages this risk by investing according to benchmarks with specified duration target and tracking error limit. The assets and the Petroleum Fund will re-price or mature within the following periods:

As at 31/12/2019

	USD							
	Statement of financial	Non-interest	6 months or					
FINANCIAL ASSETS	position	sensitive	less	6 to 12 months	1 to 2 years	2 to 5 years	5 to 10 years	Over 10 years
Cash and cash equivalents	940,852,534	-	940,852,534	_	-	-	-	-
Other receivables	32,565,093	32,565,093	-	-	-	-	-	-
Financial assets at fair value	16,064,676,259	6,542,828,160	13,745,465	33,755,798	158,437,247	6,629,771,970	2,203,437,416	482,700,203
through profit or loss								
Total assets	17,038,093,886	6,575,393,253	954,597,999	33,755,798	158,437,247	6,629,771,970	2,203,437,416	482,700,203
Weighted average interest			1.63%	2.14%	2.23%	2.45%	2.33%	3.19%
rate								

As at 31/12/2018 USD Statement of months or financial Non-interest FINANCIAL ASSETS position sensitive less 6 to 12 months 1 to 2 years 2 to 5 years 5 to 10 years Over 10 years 725,098,971 Cash and cash equivalents 725.098.971 25,799,760 25,799,760 Other receivables Financial assets at fair value 15,072,095,909 6,118,088,483 29,671,804 324,493,260 2,047,959,819 429,300,584 through profit or loss 15,822,994,640 6,143,888,243 29,671,804 12,816,589 6,324,493,260 2,047,959,819 429,300,584 Weighted average interest 2.63% 0.57% 2.05%

The following table summarizes the sensitivity of the Petroleum Fund's operating profit and net assets attributable to interest rate risk. The analysis is based on reasonably possible movements in the benchmark with all other variables held constant and the fair value of the Petroleum Fund's portfolio moving according to the movement in the benchmark. The reasonably possible movements in the risk variables have been determined based on the investment managers' best estimates, having regard to a number of factors, including historical levels of interest rates. However, actual movements in the risk variables may be greater or less than anticipated due to a number of factors, including unusually large market shocks resulting from changes in the performance of the economies, markets and securities to which the variable is exposed. As a result, historic variations in risk variables are not a definitive indicator of future variations in the risk variables.

14. Financial assets at fair value through profit or loss (continued)

Interest rate risk Impact on profit/(loss) for the year / Net assets

 (-1.00%)
 (+1.00%)

 31 December 2019
 486,480,827
 (486,480,827)

 31 December 2018
 446,123,463
 (446,123,463)

The Petroleum Fund has determined that a fluctuation in interest rates of 1% is reasonably possible within a given one year time period, given the economic environment in which the Petroleum Fund operates.

In determining the impact of an increase/decrease in net assets arising from market risk, management of the Petroleum Fund has considered prior period and expected future movements of the portfolio based on market information.

(iii) Currency risk

Currency risk is the risk that the value of a financial instrument will fluctuate due to changes in foreign exchange rates.

The Petroleum Fund invests in fixed income and equity securities that are denominated in currencies other than the United States dollar. Accordingly, the Petroleum Fund's assets may be affected favorably or unfavorably by fluctuations in currency rates. Therefore, the Petroleum Fund is necessarily subject to foreign exchange risks. The Petroleum Fund's assets are 77% (2018: 75%) in US dollars, therefore exposure to currency movements are limited.

The assets of the Petroleum Fund to which the Petroleum Fund had significant currency exposure at financial position date, reported in United States dollar equivalents, are set out in the following table:

			A	s at 31/12/2019 USD			
Cash and cash equivalents Equity securities Fixed interest securities Receivables Payables	USD 917,100,165 4,102,660,412 8,585,301,905 4,610,600 (3,368,504)	EUR 4,216,426 685,981,659 448,894,998 7,077,997	AUD 1,147,967 162,194,140 160,769,292 339,082 (12,124,586)	GBP 1,482,490 375,190,835 163,907,059 940,323 (11,265)	JPY 1,036,704 540,171,666 153,334,562 6,732,494 (1,352,609)	Other Currencies 15,868,782 675,483,747 681,259,597 12,864,597 (733,989)	Total 940,852,534 6,541,682,459 10,193,467,413 32,565,093 (17,590,953)
Total physical exposure Futures	13,606,304,578 1,065,700	1,146,171,080	312,325,895	541,509,442	699,922,817	1,384,742,734	17,690,976,546 1,065,700
Forward exchange contracts							
buy foreign currencysell foreign currency	105,575,923 (105,825,515)	111,359,243 (89,139,627)	30,405,337 (16,560,846)	24,856,379 (32,844,386)	28,617,268 (13,274,686)	69,980,497 (113,375,400)	370,794,647 (371,020,460)
Total derivative exposure	816,108	22,219,616	13,844,491	(7,988,007)	15,342,582	(43,394,903)	839,887
Total net exposure	13,607,120,686	1,168,390,696	326,170,386	533,521,435	715,265,399	1,341,347,831	17,691,816,433
Exposure (% of net assets)	76.92%	6.60%	1.84%	3.02%	4.04%	7.58%	100%
			As	s at 31/12/2018 USD			
Cash and cash equivalents Equity securities Interest bearing securities Receivables Payables	USD 702,152,050 3,771,002,613 7,399,772,982 6,832,368 (9,437,890)	EUR 14,848,909 655,669,691 404,094,036 5,625,071 (1,280,672)	AUD 2,417,722 178,197,094 170,978,234 628,822 (987,088)		JPY 887,904 514,885,550 167,139,449 852,001	Other Currencies 3,596,213 625,006,050 644,546,396 10,801,219 (7,650,868)	Total 725,098,971 6,118,649,255 8,954,007,426 25,799,760 (19,356,518)
Equity securities Interest bearing securities Receivables	702,152,050 3,771,002,613 7,399,772,982 6,832,368	14,848,909 655,669,691 404,094,036 5,625,071	AUD 2,417,722 178,197,094 170,978,234 628,822	USD GBP 1,196,173 373,888,257 167,476,329	887,904 514,885,550 167,139,449	Currencies 3,596,213 625,006,050 644,546,396 10,801,219	725,098,971 6,118,649,255 8,954,007,426 25,799,760
Equity securities Interest bearing securities Receivables Payables Total physical exposure	702,152,050 3,771,002,613 7,399,772,982 6,832,368 (9,437,890) 11,870,322,123	14,848,909 655,669,691 404,094,036 5,625,071 (1,280,672)	AUD 2,417,722 178,197,094 170,978,234 628,822 (987,088)	USD GBP 1,196,173 373,888,257 167,476,329 1,060,279	887,904 514,885,550 167,139,449 852,001	Currencies 3,596,213 625,006,050 644,546,396 10,801,219 (7,650,868)	725,098,971 6,118,649,255 8,954,007,426 25,799,760 (19,356,518) 15,804,198,894
Equity securities Interest bearing securities Receivables Payables Total physical exposure Futures	702,152,050 3,771,002,613 7,399,772,982 6,832,368 (9,437,890) 11,870,322,123	14,848,909 655,669,691 404,094,036 5,625,071 (1,280,672)	AUD 2,417,722 178,197,094 170,978,234 628,822 (987,088)	USD GBP 1,196,173 373,888,257 167,476,329 1,060,279	887,904 514,885,550 167,139,449 852,001	Currencies 3,596,213 625,006,050 644,546,396 10,801,219 (7,650,868)	725,098,971 6,118,649,255 8,954,007,426 25,799,760 (19,356,518) 15,804,198,894
Equity securities Interest bearing securities Receivables Payables Total physical exposure Futures Forward exchange contracts - buy foreign currency	702,152,050 3,771,002,613 7,399,772,982 6,832,368 (9,437,890) 11,870,322,123 (1,352,983)	14,848,909 655,669,691 404,094,036 5,625,071 (1,280,672) 1,078,957,035	AUD 2,417,722 178,197,094 170,978,234 628,822 (987,088) 351,234,784	USD GBP 1,196,173 373,888,257 167,476,329 1,060,279 543,621,038	887,904 514,885,550 167,139,449 852,001 683,764,904	Currencies 3,596,213 625,006,050 644,546,396 10,801,219 (7.650,868) 1,276,299,010	725,098,971 6,118,649,255 8,954,007,426 25,799,760 (19,356,518) 15,804,198,894 (1,352,983)
Equity securities Interest bearing securities Receivables Payables Total physical exposure Futures Forward exchange contracts - buy foreign currency - sell foreign currency	702,152,050 3,771,002,613 7,399,772,982 6,832,368 (9,437,890) 11,870,322,123 (1,352,983) 98,604,534 (108,459,091)	14,848,909 655,669,691 404,094,036 5,625,071 (1,280,672) 1,078,957,035	AUD 2,417,722 178,197,094 170,978,234 628,822 (987,088) 351,234,784 9,149,068 (26,031,909)	USD GBP 1,196,173 373,888,257 167,476,329 1,060,279 543,621,038 16,027,682 (30,285,273)	887,904 514,885,550 167,139,449 852,001 683,764,904 22,040,340 (6,624,820)	Currencies 3,596,213 625,006,050 644,546,396 10,801,219 (7,650,868) 1,276,299,010 60,549,331 (76,222,785)	725,098,971 6,118,649,255 8,954,007,426 25,799,760 (19,356,518) 15,804,198,894 (1,352,983) 298,365,912 (297,573,701)

The Petroleum Fund is primarily exposed to the Euro, Australian Dollar, Pound Sterling and Japanese Yen.

14. Financial assets at fair value through profit or loss (continued)

The following table details the Petroleum Fund's sensitivity to a 10% increase and decrease in the United States dollar against the relevant foreign currencies. 10% is the sensitivity rate used when reporting foreign currency risk internally to key management personnel and represents management's assessment of the reasonably possible change in foreign exchange rates. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the period end for a 10% change in foreign currency rates. The sensitivity analysis includes cash and cash equivalents, interest receivable and qualifying instruments. A negative number below indicates a decrease in profit where the United States dollar strengthens 10% against the relevant currency. For a 10% weakening of the United States dollar against the relevant currency, there would be a comparable impact on the profit, and the balances below would be a positive. The analysis presumes that all other variables, in particular interest rates, remain constant.

	As at 31/12/2019 USD	As at 31/12/2018 USD
EUR impact	(116,839,070)	(112,100,217)
AUD impact	(32,617,039)	(33,435,194)
GBP impact	(53,352,144)	(52,936,345)
JPY impact	(71,526,540)	(69,918,042)
Other currencies impact	(134,134,783)	(126,062,556)
Total currencies impact	(408,469,576)	(394,452,354)

This is mainly attributable to the exposure outstanding on all relevant foreign currencies relating to cash and cash equivalents, interest receivable and qualifying instruments in the Petroleum Fund at the end of the reporting period.

(b) Credit risk

Credit risk is the risk of loss that arises from a counterparty failing to meet their contractual commitments in full and on time or from losses arising from the change in value of a traded financial instrument as a result of changes in the credit risk on that instrument. It arises principally from Fixed interest securities held and also from derivative financial instruments, cash and cash equivalents, balances due from brokers and receivables from reverse repurchase agreements. For risk management reporting purposes the Petroleum Fund considers and consolidates all elements of credit risk exposure reflecting the fact that the main concentration to which the Petroleum Fund is exposed arises from the Petroleum Fund's investments in Fixed interest securities.

(i) Credit risk management

Article 15 of the Petroleum Fund Law provides broad constraints on the extent of credit risk that can be taken by the Petroleum Fund. To qualify as an eligible investment, debt must have a credit quality of at least equal to investment grade, while deposits are only held with financial institutions with a credit rating of at least investment grade. The investment grade rating reflects the credit rating agencies' assessment of capacity by the issuer to pay. Higher ratings reflect lower credit risk associated with the bonds. Credit risk is also managed by limiting exposure to any one company or issuer (except for a sovereign state) to 3% of the total value of the Petroleum Fund. The limits are reflected in the underlying investment mandates with managers and are monitored by the BCTL. The Petroleum Fund's maximum exposure to credit risk at reporting date in relation to each class of financial asset is the carrying amount of those assets as indicated in the statement of financial position.

The allocation of investments is 40% to listed equities and 60% to investment grade fixed interest securities which was achieved in 2018 has been changed to 35% to listed equities, 55% to investment grade fixed interest securities, 5% to alternatives and 5% to cash during the 2019 year. The IAB regularly monitors and reviews the strategic asset allocation between asset classes with consideration to the desired risk profile of the Petroleum Fund. The current strategic asset allocation is continually monitored and discussed at the IAB meetings and the Board considers this to be an appropriate level given the current investment horizon of the Petroleum Fund.

The mandate in the Operational Management Agreement prescribes that the performance of the Petroleum Fund shall be measured against benchmark indexes for a series of mandates, restricts the permissible investment universe to highly rated financial instruments and establishes tracking error limits restricting the permissible deviation of the portfolio investments from the benchmark for each mandate. The maximum loss that the Petroleum Fund would suffer from the default of a single issuer is the amount disclosed below with respect to investments in treasury notes issued by the United States Government and equity securities traded on developed market exchanges.

14. Financial assets at fair value through profit or loss (continued)

(ii) Concentration of credit exposure

Concentrations of credit risk arise when a number of financial instruments or contracts are entered into with the same counterparty, or when a number of counterparties are engaged in similar business activities or activities in the same geographic regions, or have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic, political or other conditions.

The allocation to each sovereign issuer is constantly monitored and any actual or anticipated changes to the credit risk profile of each issuing country will be considered in the allocation. Securities issued by US Treasury was 50% (2018: 49%) of the Petroleum Fund's Investments measured at fair value through profit or loss. Diversification within the non-US sovereign bond mandate is achieved through limiting each country to a maximum weight of 10% of the index and the Euro zone weight to 30%.

The Petroleum Fund's significant end of year concentrations of credit exposure by the industry or country of the issuer were as follows:

Fixed interest securities and money market securities	As at 31/12/2019 USD	As at 31/12/2018 USD
Sovereign issuers:		
United States Government	7,913,988,405	7,399,772,981
Australia Government	160,769,292	170,978,233
Japan Government	153,334,562	167,139,449
United Kingdom Government	163,907,059	167,476,329
European Governments	786,350,122	730,229,241
Governments of other countries	343,804,473	318,411,193
	9,522,153,913	8,954,007,426

(iii) Credit exposure by credit rating

The following table presents an analysis of the Petroleum Fund's debt securities classified according to the Standard & Poor's credit rating of the issuer as at each period end. AAA is the highest rating possible and indicates that the entity has an extremely strong capacity to pay interest and principal. AA is a high grade rating, indicating a very strong capacity, and A is an upper medium grade, indicating a strong capacity to pay interest and principal. BBB is the lowest investment grade rating, indicating a medium capacity to pay interest and principal. Ratings lower than AAA can be modified by + or - signs to indicate relative standing within the major categories.

	As at 31/12/2019 USD	As at 31/12/2018 USD
International fixed interest securities and money market securities		
AAA	8,770,264,585	8,290,913,936
AA	417,140,018	323,843,850
A	157,260,705	174,641,011
BBB	177,488,605	164,608,629
Not rated	671,313,500	
Total	10,193,467,413	8,954,007,426

(iv) Credit exposure by counterparty as a percentage of the Petroleum Fund's capital

No more than 1% (2018: 1%) of assets of the Petroleum Fund is exposed to a single sovereign issuer, other than the United States Government, all of which sovereigns are developed nations. The assets exposed to the United States Government amounted to 45% (2018: 47%) of the Petroleum Fund's capital. A change in the credit ratings of the Petroleum Fund's counterparties may have an impact on the future financial performance of the Petroleum Fund.

14. Financial assets at fair value through profit or loss (continued)

(c) Derivative financial instruments

The Petroleum Fund Law sets limits on the use of derivative financial instruments whereby derivatives may only be used to reduce the risk to the Petroleum Fund or to efficiently facilitate the desired exposure to an asset and whereby the risk arising from the use of the derivatives may not be higher than would result from direct exposure to the underlying assets. As such, the objective of using derivative instruments is to reduce financial risks and costs associated with implementing the investment strategy. The Petroleum Fund does not enter into or trade financial instruments, including derivative financial instruments, for speculative purposes. The individual investment mandates set by the IAB include rules for the use of derivatives within these statutory requirements.

Forward and futures contracts are contractual agreements to buy or sell a specified financial instrument at a specific price and date in the future. Forwards are customized contracts transacted in the OTC market. Futures contracts are transacted in standardized amounts on regulated exchanges and are subject to daily cash margin requirements. The main differences in the risk associated with forward and futures contracts are credit risk and liquidity risk. The Petroleum Fund has credit exposure to the counterparties of forward contracts. The credit risk related to futures contracts is considered minimal because the exchange ensures that these contracts are always honored. Forward contracts are settled gross and, therefore, considered to bear a higher liquidity risk than the futures contracts which are settled on a net basis. Both types of contracts result in market risk exposure.

15. Financial liabilities

Financial liabilities are amounts owed by the Petroleum Fund to third parties. One type of financial liability is the amount payable for securities purchased.

Another type of financial liabilities arises when derivative contracts are "out of the money", that is, an amount must be paid at the due date of the derivative contract. As a derivative is often used by the Petroleum Fund for hedging, an "out of the money" derivative may be indicative of a corresponding asset having risen in value.

There were financial instruments liabilities designated at fair value through profit or loss as at 31 December 2019 of \$225,813 (2018: \$1,352,983).

Accounting policy

Classification

The Petroleum Fund's financial liabilities are categorized as at fair value through profit or loss, unless otherwise noted.

Financial liabilities that are not at fair value through profit or loss include balances payable to financial intermediaries for the purchase of securities and other short term payables.

PART IV: NOTES TO THE STATEMENT OF CHANGES IN CAPITAL

The statement of changes in capital details the change in the net wealth of the Petroleum Fund over the year. Typically, this includes contributions to the Petroleum Fund by participants in the petroleum sector, withdrawals by the government, refunds of taxation and the net profit or loss from the Petroleum Fund's investments.

16. Capital receipts and payments

Capital receipts and payments reflect moneys received by the Petroleum Fund pursuant to the Petroleum Fund Law and amounts transferred to the State budget pursuant to an appropriation of Parliament.

Capital receipts are classified in the Petroleum Fund Law as follows:

- Article 6.1(a) receipts are the gross revenues, including tax revenue, of Timor-Leste from any petroleum operations.
- Article 6.1(b) receipts are amounts received by the National Petroleum Authority pursuant to the Timor Sea Treaty.
- Article 6.1(c) receipts are amounts received from the investment of the capital of the Petroleum Fund.
- Article 6.1(e) include any other petroleum-related receipts.

16. Capital receipts and payments (continued)

The following table shows the capital receipts and payments of the Petroleum Fund.

Year ended 31/12/2019 USD

				To		
	Article 6.1(a)	Article 6.1(b)	Article 6.1(e)	Consolidated	Refunds of	
Month	receipts	receipts	other receipts	Fund	Taxation	Total
January	30,664,900	31,432,164	924	-	-	62,097,988
February	31,812,936	62,635,919	-	-	-	94,448,855
March	36,840,678	46,888,888	-	-	-	83,729,566
April	30,963,695	56,625,995	(924)	-	-	87,588,766
May	16,387,734	57,914,515	-	(120,000,000)	-	(45,697,751)
June	24,083,778	6,490,765	-	(100,000,000)	-	(69,425,457)
July	23,169,715	22,019,041	-	_	-	45,188,756
August	25,742,987	26,286,755	-	(100,000,000)	-	(47,970,258)
September	37,625,186	31,852,670	-	(100,000,000)	-	(30,522,144)
October	15,897,802	51,907,753	-	_	-	67,805,555
November	17,956,338	7,657,433	-	(248,000,000)	-	(222,386,229)
December	36,242,023	27,154,798		(301,000,000)		(237,603,179)
Totals	327,387,772	428,866,696	=	(969,000,000)	<u>-</u>	(212,745,532)

Year ended 31/12/2018 USD

				To		
	Article 6.1(a)	Article 6.1(b)	Article 6.1(e)	Consolidated	Refunds of	
Month	receipts	receipts	other receipts	Fund	Taxation	Total
January	25,432,090	14,003,488	-	-	-	39,435,578
February	15,987,848	26,713,435	-	-	-	42,701,283
March	23,016,785	33,494,979	-	-	-	56,511,764
April	18,676,633	24,071,380	-	-	-	42,748,013
May	15,585,368	33,716,370	-	(70,000,000)	-	(20,698,262)
June	6,329,905	14,877,797	-	-	-	21,207,702
July	17,753,934	-	120,198	-	-	17,874,132
August	15,038,385	3,554,951	5,944,000	(140,000,000)	-	(115,462,664)
September	31,352,917	5,660,018	-	_	-	37,012,935
October	21,247,539	25,926,688	-	(220,000,000)	-	(172,825,773)
November	25,703,069	39,229,877	-	(220,000,000)	-	(155,067,054)
December	43,908,938	22,734,221		(332,500,000)	(63,334,661)	(329,191,502)
Totals	260,033,411	243,983,204	6,064,198	(982,500,000)	(63,334,661)	(535,753,848)
Total Article 6.1			510,080,813			· ·

Accounting policies, estimates, assumptions, judgements and risks

Capital

Judgments have been made as to whether certain transactions should be recognized as capital or revenue.

Petroleum Fund gross receipts

The Petroleum Fund Law requires certain parties to deposit taxes and other petroleum related payments payable to the Government of Timor-Leste directly into the Petroleum Fund. The Petroleum Fund recognizes these and other transactions as follows:

- Payments made as Petroleum Fund receipts in accordance with Article 6.1(a) are recognized as increases in the statement of changes in capital of the Petroleum Fund.
- Payments made by the Designated Authority in accordance with Article 6.1(b) are recognized as increases in the statement of changes in capital of the Petroleum Fund.

16. Capital receipts and payments (continued)

- Income earned by the Petroleum Fund from the investment of its assets is recognized in the statement of profit or loss and other comprehensive income in accordance with Article 6.1(c).
- It is noted that the main source of capital receipts currently relates to the oil revenues generated from the Bayu-Undan Field for which gas production is expected to be exhausted around 2022. On 6 March 2018, the governments of Timor Leste and Australia signed a new Maritime Boundaries Treaty, and in the same year, negotiations between the governments of Timor Leste, Australia and the Sunrise Joint Venture on the new Greater Sunrise Production Sharing Contract commenced. It is expected that the production from the new Greater Sunrise field will start in 2026. Payments received by Timor-Leste relating directly to Petroleum Fund resources not covered in Article 6.1 (a) to (d) of the Petroleum Fund Law are recognized as increases in the statement of changes in capital of the Petroleum Fund in accordance with Article 6.1(e).
- Management fees paid from the gross receipts of the Petroleum Fund pursuant to Article 6.2 are recognized in the statement of profit or loss and other comprehensive income.
- Contractors pay both Corporate Income Tax (CIT) and Supplemental Petroleum Tax (SPT) in advance based upon forecast financial information. Where the amount of tax based upon actual financial information is less than the amount paid based upon forecast, an overpayment of tax may occur. In order to verify and validate the overpayment of taxes claimed by contractors, the Directorate General of Tax Authority conducts an audit exercise to verify the amount of the overpayment claimed by a contractor. The overpayment amount of taxes to be refunded is determined after the audit inspection is completed. Refunds in respect of Overpaid taxes have historically taken place for the financial years of 2011, 2012 and 2013, and a refund was paid out by the Petroleum Fund in 2018 in respect of those years which reduced the Fund's net assets by \$63 million. It is possible that future tax refunds might be paid out in the upcoming years from the Petroleum Fund. Refunds of taxation made pursuant to Article 10 are recognized as reductions in the statement of changes in capital of the Petroleum Fund.

Transfers to the Consolidated Fund

The National Government of República Democrática de Timor-Leste ("the Consolidated Fund") comprises:

- · Central government ministries, and
- Autonomous agencies under significant control of Ministry of Finance.

Transfers to the Consolidated Fund are appropriations approved by the National Parliament of Timor-Leste. All transfers to the Consolidated Fund are authorized and recognized when paid to the Consolidated Fund.

Objectives of managing capital

The Petroleum Fund is a mandatory financial reserve established with the objective of allocating financial wealth obtained from natural resources fairly and equitably between current and future generations of Timor-Leste citizens. The Petroleum Fund's capital structure consists solely of paid in capital derived from petroleum receipts and other sources as described in Note 3(c). The Petroleum Fund Law requires the Government to annually calculate Estimated Sustainable Income (ESI) which is defined as the maximum amount that can be appropriated from the Petroleum Fund in a fiscal year and leave sufficient resources in the Petroleum Fund for an amount of equal real value to be appropriated in all later fiscal years. The ESI calculation is submitted with the annual budget to Parliament who are required to take the ESI into consideration when determining the amount of capital to be appropriated from the Petroleum Fund. Transfers in excess of the ESI are permitted subject to certain provisions in the Petroleum Fund Law being satisfied.

There has been no change during the year in these objectives and policies for managing capital and the Petroleum Fund has complied with all legislative requirements relating to the management of the Petroleum Fund's capital.

PART V: NOTES TO THE STATEMENT OF CASH FLOWS

The statement of cash flows, also known as the cash flow statement, presents the movement in cash flows over the period of 1 January to 31 December as classified under operating and financing activities.

Cash flow generally means cash movements in the Petroleum Fund's bank accounts and movements in short term investments that are highly liquid and involve very low risk of change in value.

Cash flow from operating activities presents the movement in cash during the year relating to the Petroleum Fund's revenue generating activities of the Petroleum Fund, namely investing in securities.

Cash flow from financing activities includes the movement in cash flow resulting from receipts into the Petroleum Fund deposited by participants in the exploitation of petroleum resources and transfers out of the Petroleum Fund to the Consolidated Fund or to refund tax

For the purposes of the statement of cash flows, cash and cash equivalents comprise balances with an original maturity of less than 90 days.

17. Reconciliation of net cash flows

	Year ended 31/12/2019	Year ended 31/12/2018
Profit/(loss) for the year	<i>USD</i> 2,100,923,843	<i>USD</i> (459,920,721)
Interest received from investing activities	(21,313,500)	(439,920,721)
(Increase)/decrease in financial assets at fair value through profit or loss	(992,580,350)	1,390,081,802
(Increase)/decrease in receivables	(7,219,496)	9,652,530
Increase/(decrease) in accounts payable	600,079	586,047
(Decrease)/increase in payables for securities purchased	(2,365,644)	6,476,132
Net cash provided by operating activities	1,078,044,932	946,875,790

Accounting policy

Cash inflows from investments are presented net of withholding taxes, when applicable.

PART VI: NON-FINANCIAL DISCLOSURES

18. Personnel

The Petroleum Fund did not employ any personnel during the year (2018: nil).

19. Contingent assets, contingent liabilities and commitments

There were no contingent assets, contingent liabilities or commitments as at 31 December 2019 (2018: nil).

20. Related parties

The following parties are considered related parties of the Petroleum Fund:

The ultimate controlling party of the Petroleum Fund is the Democratic Republic of Timor-Leste ('the Government').

The Government

The Government, as stipulated in Article 11.1 of the Petroleum Fund Law, is the overall manager of the Petroleum Fund.

The Petroleum Fund receives receipts on behalf of the Government as disclosed in Note 16. The Government, through the State budget, meets the expenses of the Petroleum Fund, including the audit fee, not otherwise covered by the management fee.

The Petroleum Fund makes transfers to the Consolidated Fund of Timor-Leste (pursuant to Article 7 of the Petroleum Fund Law) as disclosed in the statement of changes in capital.

20. Related parties (continued)

Banco Central de Timor-Leste (BCTL)

The BCTL is the operational manager of the Petroleum Fund, in accordance with Article 11.3 of the Petroleum Fund Law.

This means that the operational manager is, in particular, responsible for oversight of the investment managers and service providers, collection of dividends, interest and proceeds of matured securities, the exercise of options and, in general, for any other operation concerning the day-to-day administration of the securities and other assets and liabilities of the Petroleum Fund.

The management fee covers the operational management of the Petroleum Fund which is undertaken by the BCTL in accordance with the provisions of Article 11.3 of the Petroleum Fund Law. The audit fee and expenses incurred within the Ministry of Finance relating to the overall management of the Petroleum Fund are met directly from the State budget. The management fee paid to the BCTL for the period was composed as follows:

	Year ended	Year ended
	31/12/2019	31/12/2018
	USD	USD
Custody and external management services	8,501,090	9,326,043
IAB expenses	248,195	256,871
BCTL operating expenses	5,074,140	5,073,803
Total management fees	13,823,425	14,656,717
Other expenses	1,015,865	844,652
Total	14,839,290	15,501,369

BCTL were entitled to receive a management fee for its respective services within the parameters of Annex 2 of the Operational Management Agreement Actualization dated 20 April 2015. In the current year, these fees amount to an aggregate of 0.08% (2018: 0.09%) per annum of the net assets of the Petroleum Fund. Management fees are payable monthly in arrears. Total management fees for the year amounted to US\$13,823,425 (2018: US\$14,656,717).

The management fees payable as at 31 December 2019 is US\$3,311,041 (2018: US\$2,710,962).

National Petroleum and Minerals Authority

The National Petroleum and Minerals Authority manages the revenues from the production sharing contracts between Timor-Leste and Australia and transfers the Timor-Leste portion to the Petroleum Fund as Article 6.1(b) receipts as disclosed in Note 16.

Timor Gap E.P.

Timor Gap E.P. is the national petroleum company and has the mandate to conduct oil and gas business on behalf of the Timor-Leste Government. Timor Gap is building an integrated oil & gas company to cover upstream and downstream activities, as well as services to the sector.

During the 2019 financial year certain subsidiaries of Timor Gap E.P. issued debt instruments with a face value of \$650,000,000 which were bought by the Petroleum Fund. Further details of these transactions are set out in Note 13.

21. Encumbrances on the Petroleum Fund

Encumbrances on the assets of the Petroleum Fund

In accordance with Article 20 of the Petroleum Fund Law, burdens or encumbrances, in any of their forms, may be put by way of contract or agreement on Petroleum Fund assets, up to a limit of 10% of the total value of the Petroleum Fund at the time the burden or encumbrances is put, provided that this is in compliance with the principles in general rules for creating, issuing and managing public debt.

During the 2019 financial year and as at the financial position date, there were no encumbrances or burdens on the assets of the Petroleum Fund.

22. Application of new and revised IFRS

This note provides information about new IFRS that have been adopted and forthcoming standards that are not yet effective.

22.1. New and revised IFRS applied with no material effect on the financial statements

New and amended standards applied for the first time in the current financial year by the Petroleum Fund are:

- IFRS 16 Leases
- Prepayment Features with Negative Compensation Amendments to IFRS 9
- Long-term Interests in Associates and Joint Ventures Amendments to IAS 28
- Annual Improvements to IFRS Standards 2015 2017 Cycle
- Plan Amendment, Curtailment or Settlement Amendments to IAS 19
- Interpretation 23 Uncertainty over Income Tax Treatments.

The Petroleum Fund has not elected to adopt the following amendment early:

- Definition of Material – Amendments to IAS 1 and IAS 8.

The amendments listed above did not have any impact on the amounts recognized in prior periods and are not expected to significantly affect the current or future periods.

22.2. Adoption of IFRS that are not yet effective

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2019 reporting periods and have not been early adopted by the Petroleum Fund. These standards are not expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

23. Subsequent events

On 31 January 2020, the World Health Organization declared a global emergency following the outbreak of Coronavirus Disease (Covid-19). In the weeks following the declaration Covid-19 spread to become a worldwide pandemic, which had a material impact on the value of public financial securities. The Petroleum Fund, in common with the vast majority of reporting entities, is not in a position to predict the extent or duration of the Covid-19 pandemic nor its consequences for global markets. As at the date of authorizing these financial statements, the Petroleum Fund was not in a position to quantify the effect, if any, on the Fund's investments.

The Petroleum Fund prepares its financial statements based on information that was reasonably available at the reporting date. Because Covid-19 arose as a global pandemic after the reporting date, the Petroleum Fund has made no adjustment to the amounts shown in these financial statements.

Further, subsequent to the reporting date of 31 December 2019 the price of West Texas Crude oil fell significantly. A long-term fall in oil price may impact the value of the private debt instruments issued by Timor Gap, the repayment of which depends on Timor Gap's future role in the extraction and sale of petroleum products. However, as at the date of authorizing these financial statements, the Petroleum Fund was not in a position to quantify the effect, if any, on the Fund's private debt investments.

The subsequent events listed above are not expected to affect the position of the Fund as a going concern.

No other matter or circumstance has occurred subsequent to year end that has significantly affected, or may significantly affect, the operations of the Fund, the results of those operations or the state of affairs of the Fund in subsequent financial years.

PART VII: SCHEDULE OF FINANCIAL ASSETS

24. Schedule of financial assets valued through profit or loss

(a) Fixed interest securities – issued by sovereign states and supranationals

Security	Nominal	Fair Value	Security	Nominal	Fair Value
Australia 5.75% 15May21	4,000,000	3,017,483			
Australia 5.75% 15Jul22	15,041,000	12,139,366	Denmark 3.00% 15Nov21	124,217,000	20,013,030
Australia 2.25% 21Nov22	8,500,000	6,218,500	Denmark 1.50% 15Nov23	127,580,200	20,712,532
Australia 2.75% 21Apr24	8,627,000	6,544,767	Denmark 7.00% 10Nov24	12,882,000	2,664,004
Australia 3.25% 21Apr25	11,940,000	9,391,597	Denmark 1.75% 15Nov25	137,193,000	23,280,856
Australia 4.25% 21Apr26	33,347,000	28,052,875	Denmark 0.50% 15Nov27	53,853,000	8,603,261
Australia 4.75% 21Apr27	16,491,000	14,545,615	Denmark 4.50% 15Nov39	138,517,200	38,939,163
Australia 2.75% 21Nov27	6,573,000	5,140,942			114,212,845
Australia 3.25% 21Apr29	43,667,000	35,923,812			
Australia 2.75% 21Nov29	8,497,000	6,748,496	Finland 2.00% 15Apr24	4,165,000	5,227,916
Australia 4.50% 21Apr33	12,640,000	12,187,416	Finland 0.50% 15Sep29	5,620,000	6,589,968
Australia 3.75% 21Apr37	11,289,000	10,422,382	Finland 2.62% 04Jul42	250,000	414,949
Australia 3.00% 21Mar47	12,170,000	10,436,039			12,232,833
		160,769,292			
			France 0.00% 25Feb21	9,050,000	10,228,382
Austria 2.10% 20Sep17	124,000	218,432	France 0.00% 25Feb22	12,535,000	14,249,400
Austria 3.50% 15Sep21	1,353,000	1,640,568	France 1.75% 25Nov24	4,374,500	5,429,719
Austria 3.65% 20Apr22	336,000	423,629	France 0.50% 25May25	2,702,000	3,173,170
Austria 1.75% 20Oct23	274,000	334,639	France 0.00% 25Mar25	10,200,000	11,627,942
Austria 0.00% 15Jul24	725,000	827,194	France 0.75% 25Nov28	7,370,000	8,803,448
Austria 4.85% 15Mar26	848,000	1,290,127	France 0.75% 25May28	3,456,000	4,145,344
Austria 0.50% 20Apr27	12,660,000	14,904,445	France 0.50% 25May29	7,179,000	8,398,930
Austria 6.25% 15Jul27	195,000	330,633	France 1.50% 25May31	6,071,000	7,861,964
Austria 0.50% 20Feb29	1,845,000	2,168,610	France 5.75% 25Oct32	1,126,000	2,152,130
Austria 2.40% 23May34	1,255,000	1,840,388	France 1.25% 25May34	1,100,000	1,391,198
Austria 4.15% 15Mar37	714,000	1,328,632	France 4.75% 25Apr35	2,280,000	4,288,380
Austria 3.15% 20Jun44	1,035,000	1,871,728	France 1.25% 25May36	809,000	1,020,716
Austria 3.80% 26Jan62	153,000	360,241	France 4.00% 25Oct38	798,124	1,452,548
1 tusti tu 3.0070 2034ii 02	155,000	27,539,266	France 1.75% 25Jun39	3,300,000	4,509,666
		21,500,200	France 4.50% 25Apr41	970,000	1,954,305
Belgium 0.50% 22Oct24	2,845,000	3,321,916	France 3.25% 25May45	3,971,000	7,064,944
Belgium 4.50% 28Mar26	1,034,000	1,541,892	France 2.00% 25May48	8,115,000	11,789,321
Belgium 0.80% 22Jun27	2,765,000	3,317,314	France 4.00% 25Apr55	1,214,000	2,624,256
Belgium 5.50% 28Mar28	559,000	940,635	1 tance 4.00/0 23/1pi33	1,214,000	112,165,762
Belgium 0.80% 22Jun28	2,913,000	3,499,414			112,103,702
Belgium 0.90% 22Jun29	6,770,000	8,211,345	Germany 0.00% 18Oct24	11,576,000	13,292,188
Belgium 5.00% 28Mar35	3,683,800	7,052,981	Germany 0.25% 15Feb29	8,776,000	10,302,491
Belgium 4.25% 28Mar41	2,652,400	5,148,260	Germany 4.75% 04Jul34	306,100	590,077
Belgium 3.75% 22Jun45	892,000	1,702,266	Germany 2.50% 04Jul44	3,517,039	6,098,358
Beigium 3.73/0 22Jun43	892,000	34,736,023	Germany 2.50% 043ul44 Germany 2.50% 15Aug46	4,065,000	7,182,808
		34,730,023	Germany 2.50% 15Aug40	4,005,000	37,465,922
Canada 3.50% 01Jun20	2,380,000	1,853,718			37,403,922
Canada 0.75% 01Mar21	35,600,000	27,209,000	HK 1.06% 05Feb20	6,050,000	778,857
	15,385,000		HK 2.93% 13Jan20	2,350,000	
Canada 0.75% 01Sep21 Canada 1.50% 01Jun23	23,230,000	11,709,721 17,830,534			305,808
			HK 2.46% 04Aug21	10,750,000	1,407,036
Canada 2.25% 01Mar24 Canada 2.50% 01Jun24	34,000,000	27,005,729	HK 2.49% 22Aug28	10,350,000	1,410,930
Canada 2.30% 01Jun24 Canada 2.25% 01Jun25	13,000,000	10,389,342			3,902,631
	25,120,000	19,966,503	Index 4.1.100/ 15M20	1 265 000	1 557 966
Canada 1.50% 01Jun26	16,592,000	12,659,307	Ireland 1.10% 15May29	1,265,000	1,557,866
Canada 2.25% 01Jun29	23,218,000	18,789,348	Ireland 1.70% 15May37	610,000	816,305
Canada 5.75% 01Jun33	9,427,000	10,762,295	Ireland 1.50% 15May50	298,000	384,373
Canada 5.00% 01Jun37	3,600,000	4,125,735			2,758,545
Canada 4.00% 01Jun41	7,611,000	8,196,268	Te 1 0.250/ 0131 21	2 020 000	4 22 4 1 42
Canada 3.50% 01Dec45	8,331,000	8,736,925	Italy 0.35% 01Nov21	3,830,000	4,334,142
Canada 2.75% 01Dec48	2,825,000	2,669,406	Italy 1.20% 01Apr22	12,100,000	13,971,068
Canada 2.75% 01Dec64	1,575,000	1,595,804	Italy 1.35% 15Apr22	12,130,000	14,046,274
		183,499,634	Italy 0.90% 01Aug22	3,159,000	3,629,163

24. Schedule of financial assets valued through profit or loss (continued)

Security	Nominal	Fair Value	Security	Nominal	Fair Value
Italy 0.05% 15Jan23	7,105,000	7,932,818	Netherlands 2.75% 15Jan47	205,000	378,238
Italy 1.85% 15May24	6,800,000	8,098,073			18,161,358
Italy 3.75% 01Sep24	2,795,000	3,631,941			
Italy 0.35% 01Feb25	2,680,000	2,959,461	NZ 6.00% 15May21	9,245,000	6,693,378
Italy 2.50% 15Nov25	7,665,000	9,455,228	NZ 5.50% 15Apr23	4,165,000	3,230,440
Italy 7.25% 01Nov26	821,000	1,314,253	NZ 2.00% 20Sep25	2,655,000	2,138,492
Italy 2.05% 01Aug27	1,269,000	1,535,528	NZ 4.50% 15Apr27-D	21,489,000	17,592,529
Italy 2.20% 01Jun27	9,130,000	11,091,474	NZ 3.00% 20Apr29	26,820,000	20,292,607
Italy 6.50% 01Nov27	872,000	1,383,462	NZ 3.50% 14Apr33	5,019,000	4,040,242
Italy 4.75% 01Sep28	840,000	1,231,702	NZ 2.75% 15Apr37	2,984,000	2,211,856
Italy 3.00% 01Aug29	3,585,000	4,683,438			56,199,544
Italy 1.35% 01Apr30	5,312,000	5,944,138			
Italy 6.00% 01May31	1,557,000	2,580,386	Norway 3.75% 25May21	83,735,000	10,061,228
Italy 2.45% 01Sep33	1,202,000	1,478,348	Norway 2.00% 24May23	192,687,000	22,616,671
Italy 3.35% 01Mar35	4,600,000	6,208,980	Norway 3.00% 14Mar24	30,660,000	3,798,668
Italy 3.10% 01Mar40	1,855,000	2,402,381	Norway 1.75% 13Mar25	51,060,000	5,994,607
Italy 5.00% 01Sep40	1,610,000	2,654,691	Norway 1.75% 06Sep29	43,155,000	5,023,422
Italy 4.75% 01Sep44	3,642,000	5,981,968			47,494,596
Italy 3.85% 01Sep49	5,985,000	8,760,464			
		125,309,379	Portugal 2.20% 17Oct22	2,765,000	3,338,773
1 000/ 200 20	55 200 000	51.4.420	Portugal 4.12% 14Apr27	2,228,000	3,267,812
Japan 1.00% 20Sep20	55,300,000	514,428	Portugal 1.95% 15Jun29	703,000	907,486
Japan 1.10% 20Jun20	55,450,000	513,324			7,514,071
Japan 1.30% 20Jun20	31,450,000	291,434	g: 2.250/ 01g 20	2 701 000	2 112 267
Japan 1.30% 20Mar20	31,750,000	294,112	Singapore 3.25% 01Sep20	2,781,000	2,113,267
Japan 0.10% 01Nov20 Japan 1.00% 20Sep21	1,475,200,000 60,450,000	13,603,026 568,655	Singapore 2.25% 01Jun21 Singapore 3.12% 01Sep22	15,843,000 7,946,000	11,922,377 6,215,255
Japan 1.10% 20Dec21	1,039,450,000	9,799,481	Singapore 2.75% 01Jul23	11,639,000	9,125,010
Japan 1.10% 20Sep21	34,800,000	328,003	Singapore 3.00% 01Sep24	15,519,000	12,401,750
Japan 1.30% 20Mar21	210,400,000	1,976,721	Singapore 2.12% 01Jun26	6,000,000	4,606,418
Japan 1.10% 20Mar21	446,350,000	4,181,222	Singapore 3.50% 01Mar27	30,511,000	25,773,022
Japan 0.80% 20Sep22	918,550,000	8,684,818	Singapore 2.87% 01Sep30	14,143,000	11,740,082
Japan 0.80% 20Sep23	226,550,000	2,161,671	Singapore 3.37% 01Sep33	3,020,000	2,677,161
Japan 0.30% 20Dec24	1,127,700,000	10,597,611	Singapore 2.75% 01Apr42	7,924,000	6,677,332
Japan 0.40% 20Jun25	1,483,700,000	14,047,891	Singapore 2.75% 01Mar46	8,210,000	6,950,989
Japan 0.10% 10Mar25	776,000,000	7,404,147	28-F	-,,	100,202,663
Japan 0.10% 10Mar26	1,455,000,000	13,917,115			,,
Japan 0.10% 20Jun27	255,450,000	2,385,687	Slovenia 3.12% 07Aug45	245,000	399,941
Japan 2.10% 20Dec27	915,500,000	9,909,457	2	,	399,941
Japan 2.10% 20Mar27	99,100,000	1,063,215			•
Japan 0.10% 10Mar28	902,400,000	8,638,042	Spain 0.05% 31Oct21	5,998,000	6,787,460
Japan 1.60% 20Mar33	501,650,000	5,547,241	Spain 4.40% 31Oct23	10,380,000	13,777,437
Japan 1.70% 20Jun33	714,500,000	7,984,630	Spain 4.65% 30Jul25	5,640,000	8,075,851
Japan 0.20% 20Jun36	453,350,000	4,176,808	Spain 1.45% 30Apr29	7,368,000	9,110,328
Japan 2.30% 20Mar39	438,900,000	5,587,056	Spain 2.35% 30Jul33	14,739,000	20,153,563
Japan 2.00% 20Sep40	43,550,000	540,012	Spain 4.20% 31Jan37	1,043,000	1,829,296
Japan 2.30% 20Mar40	38,750,000	499,462	Spain 4.90% 30Jul40	860,000	1,673,925
Japan 2.20% 20Mar41	540,650,000	6,941,190	Spain 4.70% 30Jul41	3,564,000	6,849,610
Japan 1.90% 20Sep42	164,350,000	2,042,108	Spain 2.90% 31Oct46	703,000	1,080,364
Japan 0.30% 20Jun46	656,000,000	5,922,852	Spain 3.45% 30Jul66	710,000	1,274,063
Japan 0.80% 20Sep47	72,850,000	743,652			70,611,898
Japan 2.20% 20Mar51	31,050,000	435,779			
Japan 2.00% 20Mar52	91,750,000	1,249,192	Sweden 5.00% 01Dec20	83,815,000	9,425,953
Japan 0.40% 20Mar56	86,200,000	784,522	Sweden 3.50% 01Jun22	182,915,000	21,747,688
		153,334,562	Sweden 1.50% 13Nov23	35,235,000	4,026,606
			Sweden 2.50% 12May25	79,610,000	9,855,910
Netherlands 1.75% 15Jul23	1,868,700	2,285,035	Sweden 1.00% 12Nov26	48,900,000	5,607,276
Netherlands 0.00% 15Jan24	5,267,000	6,020,845	Sweden 0.75% 12Nov29	134,165,000	15,182,889
Netherlands 5.50% 15Jan28	2,444,000	4,142,178	Sweden 2.25% 01Jun32	19,175,000	2,550,470
Netherlands 0.25% 15Jul29	645,000	745,289	Sweden 3.50% 30Mar39	49,310,000	8,249,378
Netherlands 2.50% 15Jan33	542,000	813,143			76,646,171
Netherlands 0.50% 15Jan40	3,243,000	3,776,631			

24. Schedule of financial assets valued through profit or loss (continued)

Security Nominal Fair Value Security Nominal	
Switzerland 2.25% 06Jul20 717,000 759,967	
Switzerland 2.00% 28Apr21 3,411,000 3,698,565 USA 1.37% 30Apr20 10,000,000	10,014,025
	2,361,062,142
	1,691,424,425
Switzerland 1.25% 11Jun24 3,481,000 3,926,143 USA 1.50% 31Oct24 604,100,000	600,617,143
	1,525,861,214
Switzerland 1.25% 28May26 370,000 430,363 USA 2.12% 30Nov24 80,000,000	81,783,009
Switzerland 3.25% 27Jun27 3,585,000 4,832,213 USA 2.00% 15Feb25 12,000,000	12,264,090
Switzerland 4.00% 08Apr28 7,023,000 10,236,620 USA 2.25% 15Nov25 127,500,000	131,341,802
Switzerland 2.25% 22Jun31 4,148,000 5,652,924 USA 2.62% 31Dec25 6,500,000	6,817,593
Switzerland 3.50% 08Apr33 3,647,000 5,800,196 USA 2.62% 31Mar25 20,000,000	21,051,370
Switzerland 2.50% 08Mar36 3,543,000 5,366,714 USA 2.75% 28Feb25 24,000,000	25,464,272
Switzerland 1.25% 27Jun37 8,494,000 11,084,198 USA 2.75% 30Jun25 5,000,000	5,267,171
Switzerland 1.50% 30Apr42 4,318,000 6,174,742 USA 2.75% 31Aug25 102,000,000	108,478,156
Switzerland 4.00% 06Jan49 6,845,000 16,002,734 USA 2.87% 30Apr25 22,000,000	23,404,530
Switzerland 2.00% 25Jun64 922,000 1,833,534 USA 2.87% 30Nov25 85,000,000	90,522,841
99,101,511 USA 2.87% 31Jul25 30,000,000	32,173,828
USA 3.00% 30Sep25 35,000,000	37,653,912
UK 2.00% 22Jul20 5,450,000 7,339,156 USA 3.00% 31Oct25 92,000,000	98,798,703
UK 3.75% 07Sep21 4,759,000 6,718,510 USA 1.37% 31Aug26 134,000,000	130,979,478
UK 8.00% 07Jun21 5,843,000 8,603,468 USA 1.50% 15Aug26 33,000,000	32,548,884
UK 1.50% 22Jan21 5,600,000 7,538,817 USA 1.62% 15Feb26 104,000,000	103,724,280
UK 4.00% 07Mar22 1,550,000 2,234,445 USA 1.62% 15May26 72,000,000	71,422,634
UK 1.75% 07Sep22 3,006,000 4,134,548 USA 2.00% 15Nov26 52,400,000	53,143,240
UK 0.75% 22Jul23 6,595,000 8,821,672 USA 2.50% 28Feb26 4,000,000	4,202,385
UK 1.00% 22Apr24 12,087,000 16,319,700 USA 2.62% 31Jan26 16,500,000	17,488,851
UK 1.62% 22Oct28 9,655,000 13,811,437 USA 6.50% 15Nov26 10,000,000	13,123,772
UK 0.87% 22Oct29 6,430,000 8,582,950 USA 2.25% 15Aug27 88,000,000	91,260,693
UK 4.25% 07Jun32 734,000 1,349,357 USA 2.25% 15Nov27 80,000,000	82,507,418
UK 4.25% 07Mar36 1,407,120 2,745,318 USA 6.12% 15Nov27 10,000,000	13,222,446
UK 4.75% 07Dec38 700,000 1,488,492 USA 2.75% 15Feb28 48,000,000	51,672,962
UK 4.25% 07Sep39 806,000 1,644,808 USA 2.87% 15Aug28 105,000,000	114,384,374
UK 4.25% 07Dec40 4,372,300 8,977,941 USA 2.87% 15May28 20,600,000	22,264,120
UK 3.25% 22Jan44 8,090,000 15,120,899 USA 3.12% 15Nov28 31,000,000	34,233,562
UK 3.50% 22Jan45 6,091,000 11,936,580 USA 1.62% 15Aug29 80,000,000	78,487,908
UK 4.25% 07Dec46 4,097,000 9,047,124 USA 2.37% 15May29 50,000,000	52,159,191
UK 1.50% 22Jul47 11,861,000 16,470,924 USA 2.62% 15Feb29 50,000,000	53,523,098
UK 3.75% 22Jul52 766,500 1,702,162 USA 1.75% 15Nov29 30,000,000	29,638,882
	7,913,988,405
UK 3.50% 22Jul68 1,453,900 3,570,142	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	9,522,153,913

24. Schedule of financial assets valued through profit or loss (continued)

(b) Equity Securities

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Australia			QBE Insurance	211,792	1,905,654
AGL Energy Ltd	104,540	1,507,941	Ramsay Health Care Ltd	26,052	1,327,711
Alumina Ltd	390,170	630,821	Rea Group Ltd	8,398	608,048
AMP Ltd	534,328	719,285	Rio Tinto Ltd	59,618	4,207,192
APA Group	190,357	1,474,602	Santos Ltd	285,076	1,639,224
Aristocrat Leisure Ltd	92,318	2,180,470	Scentre Group	854,402	2,300,305
ASX Ltd	31,197	1,717,772	Seek Ltd	54,265	857,131
Aurizon Holdings Ltd	320,100	1,170,074	Sonic Healthcare Ltd	72,547	1,461,062
Ausnet Services	290,353	346,976	South32 Ltd	805,218	1,522,615
ANZ Banking Group Ltd	455,772	7,875,062	Stockland	384,195	1,242,321
Bendigo & Adelaide Bank	79,325	545,348	Suncorp Group Ltd	202,527	1,843,644
BHP Group Ltd	473,871	12,944,562	Sydney Airport	176,298	1,073,222
Bluescope Steel Ltd	82,394	871,679	Tabcorp Holdings Ltd	321,299	1,023,133
Boral Ltd	186,878	588,519	Telstra Corp Ltd	663,534	1,646,502
Brambles Ltd	254,042	2,089,372	Tpg Telecom Ltd	60,346	282,519
Caltex Australia Ltd	39,983	952,795	Transurban Group	435,730	4,548,502
Challenger Ltd	87,670	497,951	Treasury Wine Estates Ltd	116,348	1,324,947
Cimic Group Ltd	15,969	371,224	Vicinity Centers	514,003	899,683
Coca-Cola Amatil Ltd	80,552	625,129	Washington Soul Pattinson	19,124	288,895
Cochlear Ltd	9,301	1,467,812	Wesfarmers Ltd	182,190	5,276,503
Coles Group Ltd	182,197	1,900,639	Westpac Banking Corp	560,957	9,546,602
Commonwealth Bank	284,742	15,988,732	Wisetech Global Ltd	23,294	381,526
Computershare Ltd	77,893	915,502	Woodside Petroleum	150,715	3,639,215
Crown Resorts Ltd	60,120	507,559	Woolworths Group	202,296	5,140,674
CSL Ltd	72,840	14,117,145	Worley Ltd	53,512	573,648
Dexus	175,730	1,441,588			162,194,140
Flight Centre Travel Ltd	8,861	270,145	Canada		
Fortescue Metals	223,182	1,675,540	Agnico Eagle Mines Ltd	24,167	1,486,267
Goodman Group	265,116	2,478,632	Air Canada	13,486	502,520
GPT Group	313,523	1,234,190	Alacer Gold Corp	68,100	360,259
Harvey Norman Hldg	92,326	264,145	Algonquin Power & Utilities	70,099	991,954
Incitec Pivot Ltd	260,668	579,028	Alimentation Couche-Tard	108,392	3,434,605
Insurance Australia	372,069	2,000,826	Altagas Ltd	25,246	384,117
James Hardie Plc	71,476	1,381,711	Argonaut Gold Inc	124,100	184,702
Lendlease Group	90,368	1,118,026	Atco Ltd/Canada	10,984	421,572
Macquarie Group Ltd	52,004	5,031,963	Aurora Cannabis Inc	80,941	174,147
Magellan Financial	20,692	827,636	Bank of Montreal	88,205	6,836,011
Medibank Pvt Ltd	445,598	989,817	Bank of Nova Scotia	189,818	10,719,386
Mirvac Group	631,963	1,399,351	Barrick Gold Corp	191,873	3,564,463
NAB Bank Ltd	463,502	8,018,399	Bausch Health Cos Inc	39,440	1,181,602
Newcrest Mining Ltd	123,216	2,613,165	Bce Inc	57,959	2,686,203
Oil Search Ltd	218,577	1,110,880	Birchcliff Energy Ltd	78,100	155,989
Orica Ltd	60,561	932,738	Blackberry Ltd	79,051	507,804
Origin Energy Ltd	283,081	1,679,491	Bombardier Inc	238,069	352,491
Qantas Airways Ltd	116,095	579,424			

24. Schedule of financial assets valued through profit or loss (continued)

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Bonavista Energy Corp	184,400	83,899	Linamar Corp	8,800	332,048
Brookfield Asset Mgmnt	110,733	6,395,056	Loblaw Cos Ltd	24,766	1,275,780
Cae Inc	34,881	923,704	Lundin Mining Corp	68,915	411,337
Cameco Corp	35,254	312,644	Magna International Inc	69,982	3,839,766
Canadian Properties REIT	9,736	397,699	Manulife Financial Corp	368,385	7,477,067
Canadian Bank of Comrce	68,544	5,706,578	Martinrea International Inc	2,776	30,548
Canadian Nat Railway Co	135,681	12,263,859	Methanex Corp	5,154	199,085
Canadian Natural Resc	131,151	4,239,712	Metro Inc/Cn	31,204	1,286,420
Canadian Pacific Railway	23,360	5,953,711	National Bank of Canada	44,268	2,454,154
Canadian Tire Corp Ltd	10,874	1,169,284	Nutrien Ltd	64,058	3,067,669
Canadian Utilities Ltd	17,697	533,605	Obsidian Energy Ltd	32,757	23,240
Canopy Growth Corp	9,100	191,579	Onex Corp	13,387	844,978
Ccl Industries Inc	18,447	784,966	Open Text Corp	53,854	2,374,267
Cenovus Energy Inc	128,890	1,308,033	Parex Resources Inc	20,700	385,346
Centerra Gold Inc	12,400	98,301	Parkland Fuel Corp	15,269	561,188
Cgi Inc	64,719	5,410,590	Pembina Pipeline Corp	65,968	2,447,949
Ci Financial Corp Constellation Software Inc	84,606	1,414,503	Power Corp Of Canada	27,988	718,720
Cronos Group Inc	2,493	2,422,020	Power Financial Corp	39,579	1,062,459
Dollarama Inc	11,800 49,525	90,724 1,699,527	Prairiesky Royalty Ltd Ouebecor Inc	40,281	471,537 292,502
Eldorado Gold Corp	22,020	1,699,327	Restaurant Brands Int Inc	11,494 25,817	1,647,668
Emera Inc	29,682	1,271,513	Riocan REIT	26,325	542,639
Empire Co Ltd	25,566	600,138	Rogers Communications	52,835	2,620,663
Enbridge Inc	25,300	10,160,244	Royal Bank of Canada	222,953	17,648,823
Encana Corp	176,927	829,547	Saputo Inc	32,346	999,751
Enerflex Ltd	18,800	176,873	Shaw Communications Inc	63,337	1,284,567
Fairfax Financial Holdings	3,584	1,680,409	Shopify Inc	10,827	4,309,089
First Capital Realty Inc	24,382	388,269	Smartcentres REIT	13,248	318,340
First Quantum Minerals	73,352	741,015	Stars Group Inc	19,333	503,023
Fortis Inc/Canada	57,088	2,364,963	Sun Life Financial Inc	114,650	5,224,341
Franco-Nevada Corp	20,545	2,120,803	Suncor Energy Inc	246,336	8,058,274
Genworth Mi Canada Inc	14,977	654,056	Tc Energy Corp	115,278	6,130,377
George Weston Ltd	10,565	837,215	Teck Resources Ltd	98,013	1,699,873
Gildan Activewear Inc	36,570	1,078,698	Telus Corp	35,385	1,370,375
Great-West Lifeco Inc	43,895	1,123,820	Thomson Reuters Corp	28,513	2,036,751
H&R REI Trust	27,208	442,084	Toronto-Dominion Bank	256,372	14,394,782
Husky Energy Inc	55,317	444,071	Transalta Renewables Inc	40,600	485,290
Hydro One Ltd	48,538	935,013	Transcontinental Inc	38,100	464,222
Ia Financial Corp Inc	16,434	902,333	West Fraser Timber Co Ltd	5,558	245,122
Igm Financial Inc	14,005	401,115	Westshore Terminals Invest	17,100	249,231
Imperial Oil Ltd	51,192	1,352,486	Wheaton Precious Metals	47,401	1,410,972
Intact Financial Corp	18,741	2,022,451	WSP Global Inc	16,072	1,095,758
Inter Pipeline Ltd	51,385	892,377			221,808,637
Keyera Corp	29,977	783,667	Denmark		
Kinross Gold Corp	156,844	745,061	Ap Moller - Maersk A/S	1,242	1,755,230
Kirkland Lake Gold Ltd	23,650	1,043,572	Carlsberg A/S	12,728	1,902,795

24. Schedule of financial assets valued through profit or loss (continued)

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Chr Hansen Holding A/S	14,168	1,127,566	Banco De SAbadell SA	831,474	970,663
Coloplast A/S	14,573	1,812,595	Banco Espirito Santo SA	247,871	33,388
Danske Bank A/S	86,528	1,404,439	Banco SAntander SA	2,051,074	8,587,694
Demant A/S	8,019	253,327	Bank of Ireland Group Plc	172,143	941,840
Dsv Panalpina A/S	26,495	3,059,840	Bankia SA	126,944	270,027
Genmab A/S	8,109	1,805,248	Bankinter SA	100,081	733,811
H Lundbeck A/S	10,947	418,508	Basf Se	128,831	9,719,427
ISS A/S	24,649	593,175	Bayer AG	116,731	9,549,508
Novo Nordisk A/S	259,287	15,098,781	Bayerische Motoren W AG	49,172	3,898,420
Novozymes A/S	26,925	1,320,971	Befimmo S.C.A	3,697	224,509
Orsted A/S	23,729	2,461,656	Beiersdorf AG	17,312	2,065,698
Pandora A/S	15,442	672,702	Biomerieux	5,492	487,633
Tryg A/S	19,345	574,800	Bnp Paribas SA	166,889	9,896,799
Vestas Wind Systems A	24,408	2,476,365	Bollore SA	96,028	418,008
		36,737,997	Bouygues SA	30,660	1,303,328
Europe			Brenntag AG	20,309	1,107,699
ABN Amro Bank NV	51,596	939,406	Bureau Veritas SA	49,839	1,301,264
Accor SA	25,743	1,206,430	Caixabank SA	463,018	1,450,068
Acs Actividades De CYS	33,775	1,351,579	Capgemini SE	19,790	2,419,135
Adidas AG	22,779	7,427,920	Carl Zeiss Meditec AG	4,663	596,177
Adyen NV	1,350	1,107,739	Carrefour SA	73,034	1,225,611
Aegon NV	224,822	1,026,107	Casino Guichard Perrachon	6,407	299,757
Aena Sme SA	14,131	2,704,479	Cellnex Telecom SA	28,989	1,244,336
Aeroports De Paris	4,377	862,755	Cie De Saint-Gobain	66,698	2,732,701
Ageas	23,620	1,396,729	Cie Gnrl Des Etb Michelin	33,181	4,043,018
Aib Group Plc	198,456	692,117	Cnh Industrial NV	127,540	1,401,572
Air Liquide SA	75,535	10,687,534	Cnp Assurances	25,963	514,965
Airbus Se	63,881	9,356,255	Coca-Cola European Prters	14,793	732,287
Akzo-Nobel	30,621	3,115,485	Cofinimmo	1,621	238,364
Allianz Se	64,809	15,920,924	Colruyt Sa	9,387	489,756
Alstom SA	19,040	902,557	Commerzbank AG	118,304	733,035
Altice Europe NV	76,690	493,264	Continental AG	15,270	1,978,708
Amadeus It Group SA	54,845	4,481,824	Convivio SA	6,372	721,694
Amundi SA	5,860	457,490	Covestro AG	24,238	1,124,744
Andritz AG	10,770	465,439	Credit Agricole SA	174,462	2,531,150
Anheuser-Busch Inbev Sa	93,888	7,662,856	Crh Plc	99,899	3,999,914
Arcelormittal Sa	86,932	1,525,975	Daimler AG	113,691	6,290,937
Arkema SA	8,402	890,121	Danone SA	77,277	6,408,606
Aroundtown Sa	109,936	983,030	Dassault Aviation SA	209	274,016
Asml Holding NV	53,115	15,698,366	Dassault Systemes Se	16,469	2,709,190
Asr Nederland NV	51,859	1,934,376	Davide Campari-Milano	68,629	627,074
Assicurazioni Generali Spa	155,259	3,204,977	Delivery Hero Se	9,804	777,833
Atlantia Spa	63,418	1,479,972	Deutsche Bank AG	324,752	2,524,399
Atos Se	12,504	1,043,136	Deutsche Boerse AG	23,679	3,733,116
Axa SA	245,527	6,917,663	Deutsche Lufthansa AG	36,570	671,165
Banco Bilbao Vizcaya Arg	995,333	5,567,314	Deutsche Post AG	135,557	5,160,600

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Deutsche Telekom AG	470,745	7,723,260	Hochtief AG	4,092	523,174
Deutsche Wohnen Se	50,154	2,050,931	Iberdrola SA	882,126	9,089,913
Dialog Semiconductor	6,795	344,911	Icade	3,092	335,450
E.On Se	349,336	3,744,054	Iliad SA	4,287	556,045
Edenred	35,065	1,809,007	Industria De Diseno Textil	178,303	6,294,565
Energias De Portugal SA	355,944	1,534,661	Infineon Technologies AG	157,620	3,585,456
Eiffage SA	10,516	1,204,030	Ing Groep NV	579,124	6,946,614
Electricite De France SA	71,079	792,117	Ingenico Group SA	7,112	772,776
Elisa Oyj	29,913	1,652,005	Intesa Sanpaolo Spa	1,838,531	4,845,688
Enagas SA Endesa SA	34,648	884,413 1,188,602	Ipsen SA	9,956	876,168 330,294
Enel Spa	44,566 1,212,152	9,622,452	Italgas Spa Jcdecaux SA	54,050 11,442	351,145
Engie SA	234,666	3,791,825	Jeronimo Martins Sgps SA	32,054	527,656
Eni Spa	454,851	7,069,357	Kbc Group Nv	32,345	2,430,408
Erste Group Bank AG	59,663	2,252,929	Kering SA	9,511	6,247,653
Essilorluxottica SA	43,693	6,646,872	Kerry Group Plc	21,489	2,655,767
Eurazeo SE	6,876	469,659	Kingspan Group Plc	20,941	1,275,215
Eurofins Scientific Se	1,108	614,651	Kion Group AG	9,287	644,452
Eutelsat Communications	27,016	439,416	Klepierre	26,284	995,458
Evonik Industries AG	27,854	851,376	Knorr-Bremse AG	3,111	316,489
Exor NV	18,697	1,449,809	Kone Oyj Common Stock	49,331	3,226,092
Faurecia SE	18,931	1,018,727	Koninklijke Ahold Delhaize	162,316	4,062,143
Ferrari NV	13,439	2,231,113	Koninklijke Dsm NV	22,451	2,925,865
Ferrovial SA	63,221	1,900,458	Koninklijke Kpn NV	457,917	1,352,365
Fiat Chrysler Automobiles	132,232	1,958,391	Koninklijke Philips NV	115,084	5,620,055
Finecobank Banca Fineco	59,081	708,944	Koninklijke Vopak NV	9,311	505,126
Flutter Entertainment Plc	5,144	625,628	Lanxess AG	10,988	737,822
Fortum Oyj	56,635	1,398,602	Legrand SA	79,782	6,501,715
Fraport AG	5,921	504,057	Leonardo Spa	41,397	485,592
Fresenius Medical Care AG	26,698	1,970,130	L'Oreal SA	40,237	11,901,251
Fresenius Se & Co Kgaa	56,526	3,175,060	LVMH SE	35,788	16,639,257
Fuchs Petrolub Se	10,372	512,739	Mapfre SA	164,758	436,460
Galapagos Nv	4,780	1,000,675	Mediaset Espana Com SA	40,257	254,411
Galp Energia Sgps SA	70,412	1,177,658	Mediobanca SPA	141,810	1,562,210
Gaztransport Et Technigaz	2,694	258,251	Merck Kgaa	16,723	1,978,523
Gea Group AG	18,695	618,852	Metro AG	33,995	543,962
Gecina SA	7,223	1,294,008	Metropole Television SA	30,148	567,516
Getlink SE	49,436	860,680	Metso Oyj	11,927	471,929
Grifols SA	38,576	1,360,968	Moncler Spa	23,047	1,036,621
Groupe Bruxelles Lambert	10,077	1,061,013	Mtu Aero Engines AG	6,547	1,874,732
Hannover Rueck Se	9,099	1,760,830	Munich RE	20,996	6,207,815
Heidelbergcement AG	18,722	1,363,903	Natixis SA	118,513	524,807
Heineken Holding NV	14,907	1,445,741	Naturgy Energy Group SA	43,192	1,086,020
Heineken NV	33,808	3,602,165	Neste Oyj	52,513	1,826,732
Henkel AG & Co Kgaa	73,857	7,506,111	Nn Group NV	65,319	2,479,702
Hermes International	4,182	3,127,340	Nokia Oyj	613,717	2,269,917

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Nokian Renkaat Oyj	18,536	534,523	Stmicroelectronics NV	81,758	2,199,808
Nordea Bank Abp	3,502	28,496	Stora Enso Oyj	70,121	1,023,241
Omv AG	38,255	2,154,792	Suez	46,271	700,140
Orange SA	263,127	3,875,124	Symrise AG	15,291	1,612,400
Orion Oyj	15,704	727,849	Telecom Italia Spa/Milano	2,049,281	1,270,330
Pernod Ricard SA	27,793	4,972,905	Telefonica Deutschland Hldg	103,654	299,722
Peugeot SA	108,549	2,595,326	Telefonica SA	577,694	4,037,322
Pirelli & C Spa	38,560	222,478	Telenet Group Holding Nv	6,585	293,153
Porsche Automobil Holding	31,231	2,334,783	Teleperformance	7,404	1,801,823
Poste Italiane Spa	62,754	712,867	Tenaris Sa	61,328	691,849
Prosus NV	53,469	3,993,061	Terna Rete Elet Naz Spa	309,499	2,068,495
Proximus Sadp	50,377	1,441,979	Thales SA	13,363	1,387,797
Prysmian Spa	32,203	776,818	Thyssenkrupp AG	52,853	715,193
Publicis Groupe SA	76,107	3,447,960	Total SA	419,591	23,158,625
Puma Se	9,110	699,968	Ubisoft Entertainment SA	8,345	575,899
Qiagen NV	28,774	978,654	Ucb Sa	16,607	1,320,927
Raiffeisen Bank Intnl	35,670	892,883	Umicore Sa	26,099	1,267,644
Randstad NV	20,807	1,271,493	Unibail-Rod-Wtfield Reit	19,081	3,011,431
Recordati Spa	28,126	1,186,139	Unicredit Spa	308,566	4,509,677
Red Electrica Corp SA	192,208	3,865,224	Unilever NV	243,367	13,994,985
Remy Cointreau SA	3,487	425,860	Uniper Se	25,168	834,820
Renault SA	24,394	1,154,984	United Internet AG	14,443	475,019
Repsol SA	426,169	3,630,408	Upm-Kymmene Oyj	73,609	2,553,973
Royal Dutch Shell Plc	50,466	1,482,197	Valeo SA	31,150	1,098,278
Rtl Group Sa	8,968	443,332	Veolia Environnement SA	69,949	1,860,871
Rwe AG	63,160	1,936,200	Verbund AG	8,278	418,700
Safran SA	41,657	6,434,174	Vidrala SA	2,440	255,266
Sampo Oyj	99,678	4,358,060	Vinci SA	72,264	8,012,673
Sanofi	199,146	20,029,311	Vivendi SA	112,177	3,251,221
Sap Se	151,005	20,350,546	Voestalpine AG	12,947	361,291
Sartorius AG	4,047	871,755	VolkswAGen AG	29,875	5,894,917
Sartorius Stedim Biotech	3,674	604,176	Vonovia Se	62,150	3,345,852
Schneider Electric Se	84,764	8,706,006	Wartsila Oyj Abp	63,630	704,819
Scor Se	22,942	962,882	Wendel SA	3,674	487,052
Seb SA	2,186	324,881	Wirecard AG	12,811	1,547,326
Ses Sa	45,169	633,778	Wolters Kluwer NV	76,879	5,611,011
Siemens AG	108,039	14,159,928	Worldline SA/France	8,147	574,764
Siemens Gamesa Ren Energy	33,941	595,674	Zalando Se	14,732	742,662
Siemens Healthineers AG	15,103	723,559	Zardoya Otis SA	109,038	855,542
Smurfit Kappa Group Plc	30,914	1,182,609			685,981,659
Snam Spa	288,417	1,517,084			
Societe Bic SA	10,326	716,320	Hong Kong		
Societe Generale SA	127,693	4,445,548	Aia Group Ltd	1,509,000	15,841,805
Sodexo SA	11,545	1,367,850	Asm Pacific Technology Ltd	39,800	552,168
Software AG	8,936	311,653	Bank Of East Asia Ltd/The	160,746	358,965
Solvay Sa	9,902	1,148,179	Boc Hong Kong Holdings Ltd	485,500	1,682,345

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Budweiser Brewing Co Apac	128,800	434,744			7,328,865
Ck Asset Holdings Ltd	467,848	3,374,452	Japan		
Ck Hutchison Holdings Ltd	354,240	3,377,913	Abc-Mart Inc	13,700	936,655
Ck Infrastructure Holdings	90,500	644,039	Acom Co Ltd	67,600	309,153
Clp Holdings Ltd	259,500	2,727,617	Adeka Corp	10,100	153,626
Galaxy Entertainment Group	282,000	2,075,605	Advantest Corp	20,800	1,179,001
Hang Lung Properties Ltd	239,000	524,513	Aeon Co Ltd	85,800	1,780,345
Hang Seng Bank Ltd	150,400	3,107,677	Aeon Financial Service Co	15,100	239,960
Henderson Land Develop Co	202,307	991,828	Aeon Mall Co Ltd	19,690	351,131
Hk Electric Investments Ltd	471,154	464,394	Agc Inc/Japan	29,200	1,055,956
Hkt Trust & Hkt Ltd	528,040	744,100	Air Water Inc	25,000	367,840
HK & China Gas Co Ltd	1,400,196	2,735,052	Aisin Seiki Co Ltd	18,700	699,475
HK Exchanges & Clearing	145,657	4,725,748	Ajinomoto Co Inc	52,700	879,909
Hsbc Holdings Plc	92,400	721,004	Akatsuki Inc	4,100	220,704
Kerry Properties Ltd	106,000	336,700	Alfresa Holdings Corp	24,400	500,236
Link Reit	321,500	3,401,996	Alps Alpine Co	29,300	671,601
Mtr Corp Ltd	219,397	1,295,241	Amada Holdings Co	45,400	522,199
New World Develop Co Ltd	766,992	1,049,325	Ana Holdings Inc	19,300	646,619
Nws Holdings Ltd	189,251	265,230	Aozora Bank Ltd	20,400	542,498
Pccw Ltd	468,000	276,290	Asahi Group Holdings	46,700	2,140,873
Power Assets Holdings Ltd	173,500	1,269,219	Asahi Intecc Co Ltd	23,400	687,950
Sands China Ltd	299,600	1,599,548	Asahi Kasei Corp	176,900	2,007,878
Sino Land Co Ltd	498,523	722,979	Astellas Pharma Inc	430,500	7,405,747
Sjm Holdings Ltd	333,000	379,079	Awa Bank Ltd	9,800	220,663
Sun Hung Kai Properties Ltd	337,500	5,163,119	Bandai Namco Holdings	24,100	1,470,283
Swire Pacific Ltd	66,000	613,260	Bank Of Kyoto Ltd	9,000	388,820
Swire Properties Ltd	153,123	507,999	Benesse Holdings Inc	9,700	256,524
Techtronic Industries Co Ltd	167,500	1,366,131	Bridgestone Corp	118,400	4,434,211
Vitasoy Int. Holdings Ltd	80,000	289,535	Brother Industries Ltd	51,800	1,081,997
Wh Group Ltd	1,187,408	1,225,231	Calbee Inc	12,600	412,174
Wharf REstate Invest. Co Ltd	319,000	1,944,672	Canon Inc	165,500	4,548,108
Wheelock & Co Ltd	205,000	1,365,474	Casio Computer Co	25,600	515,887
Wynn Macau Ltd	174,400	429,744	Central Japan Railway Co	33,100	6,697,666
Xinyi Glass Holdings Ltd	614,000	811,648	Chiba Bank Ltd	138,800	807,192
Yue Yuen Ind. Holdings Ltd	115,500	340,935	Chubu Electric Power Co	94,600	1,341,853
		69,737,323	Chugai Pharmaceutical Co	28,100	2,605,083
Israel			Chugoku Eletric Power Co	48,400	636,426
Azrieli Group Ltd	6,612	483,361	Coca-Cola Bottlers Jpn Hldg	15,600	400,640
Bank Hapoalim Bm	207,353	1,719,937	Concordia Financial Group	137,400	570,208
Bank Leumi Le-Israel Bm	208,716	1,516,726	Credit Saison Co Ltd	26,800	468,553
Elbit Systems Ltd	3,111	483,673	Cyberagent Inc	10,700	375,620
Israel Chemicals Ltd	73,326	344,976	Dai Nippon Printing Co Ltd	42,600	1,159,911
Israel Discount Bank Ltd	74,884	346,886	Daicel Corp	94,400	911,208
Mizrahi Tefahot Bank Ltd	20,357	541,046	Daifuku Co Ltd	13,400	821,201
Nice Ltd	7,754	1,202,386	Dai-Ichi Life Holdings	142,800	2,386,241
Teva Pharma Industries	69,653	689,875	Daiichi Sankyo Co Ltd	61,800	4,110,332

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Daiichikosho Co Ltd	7,700	405,282	Isuzu Motors Ltd	151,700	1,813,281
Daikin Industries Ltd	30,900	4,391,538	Itochu Corp	224,900	5,244,044
Daito Trust Construction Co	10,400	1,290,011	Itochu Techno-Solutions	6,200	175,431
Daiwa House Industry Co	83,000	2,587,568	Iyo Bank Ltd	39,900	227,266
Daiwa House Reit Invest Co	266	694,158	J Front Retailing Co Ltd	33,000	464,596
Daiwa Securities Group Inc	319,700	1,626,814	Japan Airlines Co Ltd	27,000	843,727
Denso Corp	65,100	2,974,801	Japan Airport Terminal Co	7,600	425,194
Dentsu Group Inc	29,900	1,037,248	Japan Exchange Group Inc	64,900	1,150,792
Disco Corp	3,800	905,286	Japan Post Bank Co Ltd	56,200	542,478
East Japan Railway Co	37,600	3,410,381	Japan Post Holdings Co	195,400	1,843,871
Eisai Co Ltd	31,600	2,384,066	Japan Post Insurance Co	14,500	248,171
Electric Power Devlp Co Ltd	19,000	462,783	Japan Prime Realty Invest	124	543,124
Familymart Co Ltd	27,300	659,169	Japan REI	197	1,303,363
Fanuc Corp	24,600	4,600,827	Japan Retail Fund	402	862,631
Fast Retailing Co Ltd	6,300	3,767,535	Japan Tobacco Inc	166,400	3,723,807
Fcc Co Ltd	11,400	249,242	Jfe Holdings Inc	61,600	799,227
Frontier Real Estate Invest	54	226,335	Jgc Holdings Corp	36,000	581,035
Fuji Electric Co Ltd	13,500	415,528	Jsr Corp	33,600	621,758
Fuji Media Holdings Inc	16,400	234,814	Jtekt Corp	34,600	413,895
Fujifilm Holdings Corp	54,800	2,636,753	Jxtg Holdings Inc	513,700	2,353,069
Fujitsu Ltd	24,300	2,295,279	Kajima Corp	77,500	1,039,751
Fukuoka Financial Group Inc	19,000	367,849	Kakaku.Com Inc	16,400	421,337
Gmo Payment Gateway Inc	4,700	323,064	Kamigumi Co Ltd	14,000	308,921
Hachijuni Bank Ltd	59,600	261,598	Kanamoto Co Ltd	6,900	179,111
Hakuhodo Dy Holdings	39,800	647,128	Kansai Electric Power Co	93,700	1,090,257
Hamamatsu Photonics Kk	16,700	689,975	Kansai Paint Co Ltd	26,200	645,387
Hankyu Hanshin Holdings	33,100	1,423,901	Kao Corp	77,000	6,394,524
Haseko Corp	23,000	311,323	Kawasaki Heavy Industries L	17,600	389,977
Hikari Tsushin Inc	2,600	655,293	Kddi Corp	391,100	11,706,906
Hino Motors Ltd	43,700	466,857	Keihan Holdings Co Ltd	13,200	643,754
Hirose Electric Co Ltd	5,291	682,584	Keikyu Corp	22,200	431,028
Hisamitsu Pharmaceutical	6,700	329,837	Keio Corp	11,300	686,266
Hitachi Chemical Co Ltd	18,600	783,023	Keisei Electric Railway Co	17,800	693,655
Hitachi Const Machinery	14,200	429,234	Kenedix Office Investment	31	238,758
Hitachi High-Tech Co	8,500	604,601	Keyence Corp	23,160	8,200,567
Hitachi Ltd	147,700	6,285,828	Kikkoman Corp	17,800	877,920
Hitachi Metals Ltd	36,000	534,327	Kintetsu Group Holdings	16,000	870,117
Honda Motor Co Ltd	249,900	7,123,902	Kirin Holdings Co Ltd	104,000	2,286,229
Hoshizaki Corp	6,200	554,534	Kobayashi Pharmaceutical	4,400	375,321
Hoya Corp	58,400	5,612,955	Koito Manufacturing	15,300	716,604
Hulic Co Ltd	40,500	490,435	Komatsu Ltd	128,500	3,123,374
Idemitsu Kosan Co Ltd	24,486	681,575	Konami Holdings	12,200	502,931
Ihi Corp	19,300	456,949	Konica Minolta Inc	49,500	324,306
Iida Group Holdings Co	18,500	326,506	Kose Corp	3,800	559,466
Inpex Corp	229,700	2,402,153	Kubota Corp	130,000	2,064,090
Isetan Mitsukoshi Holdings	49,900	451,361	Kuraray Co Ltd	51,200	627,073

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Kurita Water Industries	14,100	421,021	Ngk Insulators Ltd	39,800	696,935
Kyocera Corp	44,100	3,034,956	Ngk Spark Plug Co Ltd	38,900	763,861
Kyowa Kirin Co Ltd	32,600	771,541	Nh Foods Ltd	16,700	693,048
Kyushu Electric Power	45,400	394,783	Nhk Spring Co Ltd	3,400	31,067
Kyushu Railway Co	20,800	697,640	Nidec Corp	24,300	3,354,037
Lawson Inc	6,300	358,841	Nikon Corp	41,700	515,710
Line Corp	7,700	378,357	Nintendo Co Ltd	14,500	5,866,711
Lion Corp	31,000	605,880	Nippon Building Fund Inc	192	1,404,555
Lixil Group Corp	32,200	559,704	Nippon Carbon Co Ltd	6,100	230,416
M3 Inc	53,000	1,609,385	Nippon Express Co Ltd	8,300	490,324
Makita Corp	29,500	1,032,873	Nippon Paint Holdings Co	15,300	794,037
Marubeni Corp	190,500	1,420,401	Nippon Prologis Reit Inc	268	681,375
Marui Group Co Ltd	17,200	422,106	Nippon Shinyaku Co Ltd	5,100	443,947
Maruichi Steel Tube Ltd	6,700	189,579	Nippon Steel Corp	103,724	1,578,170
Mazda Motor Corp	102,400	882,897	Nippon T & T Corp	348,600	8,842,104
Mcdonald'S Hldgs Co Japan	8,400	404,251	Nippon Yusen Kk	26,200	477,109
Mebuki Financial Group Inc	149,760	384,477	Nishio Rent All Co Ltd	5,400	154,783
Medipal Holdings Corp	21,300	472,941	Nissan Chemical Corp	23,100	975,652
Meiji Holdings Co Ltd	16,200	1,098,633	Nissan Motor Co Ltd	300,300	1,757,449
Mercari Inc	5,600	115,169	Nisshin Seifun Group Inc	22,895	401,545
Minebea Mitsumi	46,500	973,858	Nissin Foods Holdings Co	9,000	672,464
Misumi Group	32,300	808,726	Nissin Kogyo Co Ltd	12,400	253,306
Mitsubishi Chemical Hldgs	207,000	1,556,381	Nitori Holdings Co Ltd	10,200	1,615,762
Mitsubishi Corp	202,000	5,389,454	Nitto Denko Corp	21,900	1,245,383
Mitsubishi Electric Co	253,700	3,497,056	Nomura Holdings Inc	529,500	2,744,093
Mitsubishi Estate Co	145,400	2,794,944	Nomura Real Estate Holdings	15,400	370,847
Mitsubishi Gas Chemical	47,400	729,700	Nomura R E Master Fund Inc	443	756,167
Mitsubishi Heavy Industries	39,500	1,543,653	Nomura Research Institute	151,721	3,259,889
Mitsubishi Materials Co	12,100	331,351	Nsk Ltd	32,800	314,192
Mitsubishi Motors Co	101,600	427,248	Ntt Data Corp	77,100	1,040,061
Mitsubishi Tanabe Pharma	43,700	807,450	Ntt Docomo Inc	344,600	9,633,261
Mitsubishi UFJ Fin Group	1,823,600	9,952,399	Obayashi Corp	126,100	1,410,974
Mitsubishi UFJ L & Fin	58,700 259,200	381,341 4,640,198	Obic Co Ltd	7,600	1,031,516
Mitsui & Co Ltd Mitsui Chemicals Inc	46,600	1,148,759	Odakyu Electric Railway Co Oji Holdings Corp	39,100 222,600	917,460 1,218,744
Mitsui Fudosan Co Ltd	115,300	2,834,889	Olympus Corp	133,200	2,070,161
Mitsui Osk Lines Ltd	18,000	501,035	Omron Corp	23,600	1,392,003
Mitsui Sugar Co Ltd	10,300	215,904	Ono Pharmaceutical Co	49,100	
Mizuho Financial Group	3,552,800	5,502,058	Open House Co Ltd	8,800	1,130,418 252,643
Monotaro Co Ltd	18,600	500,108	Oracle Corp Japan	10,300	942,093
Ms&Ad Ins Group Holdings	64,400	2,138,666	Oriental Land Co Ltd	25,800	3,532,587
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Murata Manufacturing Co Nabtesco Corp	75,300 16,600	4,673,553 497,962	Orix Corp Orix Jreit Inc	207,800 298	3,462,855 644,673
Nagoya Railroad Co Ltd	29,200	910,862	Orix freit inc Osaka Gas Co Ltd	92,100	1,771,235
Nec Corp	33,200	1,377,796	Otsuka Corp	15,600	
*			•		627,301
Nexon Co Ltd	63,400	845,917	Otsuka Holdings Co Ltd	53,800	2,416,853

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Pan Pacific Int Holdings Co	57,200	952,675	Sony Corp	160,100	10,892,838
Panasonic Corp	279,500	2,647,759	Sony Financial Holdings Inc	17,700	427,862
Park24 Co Ltd	20,700	508,190	Square Enix Holdings Co Ltd	10,200	508,709
Peptidream Inc	11,300	581,247	Stanley Electric Co Ltd	24,700	721,624
Persol Holdings Co Ltd	20,800	392,362	Subaru Corp	104,600	2,611,270
Pigeon Corp	15,100	557,870	Sumco Corp	33,900	569,601
Pola Orbis Holdings Inc	16,400	394,475	Sumitomo Chemical Co Ltd	287,000	1,315,169
Rakuten Inc	86,000	739,121	Sumitomo Corp	176,800	2,642,035
Recruit Holdings Co Ltd	159,100	5,999,463	Sumitomo Dai nip Pharma	22,700	444,705
Renesas Electronics Corp	90,200	622,498	Sumitomo Electric Industries	142,600	2,167,047
Rengo Co Ltd	39,700	304,303	Sumitomo Heavy Industries	22,200	638,371
Resona Holdings Inc	270,600	1,192,706	Sumitomo Metal Mining Co	30,400	991,094
Ricoh Co Ltd	84,800	930,127	Sumitomo Mitsui Fin Group	207,800	7,719,240
Rinnai Corp	5,200	409,110	Sumitomo Mitsui Trust Hldg	53,200	2,122,615
Rohm Co Ltd	13,600	1,098,762	Sumitomo R & D Co Ltd	36,400	1,276,470
Ryohin Keikaku Co Ltd	30,000	705,590	Sumitomo Rubber Industries	27,500	338,325
Sankyo Co Ltd	6,100	203,474	Sumitomo Seika Chem Co	3,700	120,524
Santen Pharmaceutical Co	45,700	876,784	Sundrug Co Ltd	14,000	508,857
Sbi Holdings Inc/Japan	23,180	493,568	Suntory Beverage & Food	18,900	790,435
Secom Co Ltd	36,500	3,283,740	Suzuken Co Ltd/Aichi Japan	9,600	393,982
Sega Sammy Holdings Inc	29,500	429,708	Suzuki Motor Corp	66,500	2,794,009
Seibu Holdings Inc	23,300	384,635	Sysmex Corp	20,900	1,432,373
Seiko Epson Corp	41,400	630,476	T&D Holdings Inc	78,400	1,006,377
Seino Holdings Co Ltd	26,700	362,879	Taiheiyo Cement Corp	19,700	582,797
Sekisui Chemical Co Ltd	53,400	935,083	Taisei Corp	36,700	1,533,177
Sekisui House Ltd	87,200	1,871,981	Taisho Pharma Holdings Co	5,800	432,298
Seven & I Holdings Co Ltd	117,400	4,324,381	Taiyo Nippon Sanso Corp	13,200	294,791
Seven Bank Ltd	120,200	394,860	Takeda Pharmaceutical Co	161,938	6,453,677
Sg Holdings Co Ltd	6,700	151,602	Tdk Corp	15,800	1,799,898
Sharp Corp/Japan	28,500	441,891	Teijin Ltd	22,800	429,041
Shimadzu Corp	25,500	807,177	Terumo Corp	86,100	3,077,178
Shimamura Co Ltd	3,700	283,267	Thk Co Ltd	16,300	444,866
Shimano Inc	9,400	1,536,176	Tobu Railway Co Ltd	26,400	959,558
Shimizu Corp	75,100	770,522	Toho Co Ltd/Tokyo	15,000	627,329
Shin-Etsu Chemical Co Ltd	45,800	5,080,459	Toho Gas Co Ltd	10,700	438,633
Shinsei Bank Ltd	48,700	750,161	Tohoku Electric Power Co	52,000	517,727
Shionogi & Co Ltd	42,600	2,652,626	Tokai Carbon Co Ltd	28,200	283,881
Shiseido Co Ltd	42,200	3,021,469	Tokai Rika Co Ltd	9,300	183,647
Shizuoka Bank Ltd/The	103,000	774,336	Tokio Marine Holdings Inc	91,700	5,162,369
Showa Denko Kk	38,300	1,021,686	Tokyo Broadcast Systm Hldg	9,700	166,464
Sky Perfect Jsat Holdings	37,500	167,357	Tokyo Century Corp	3,000	161,491
Smc Corp/Japan	7,200	3,331,179	Tokyo Elect Power Co Hldg	216,000	926,211
Softbank Corp	206,200	2,768,307	Tokyo Electron Ltd	19,100	4,204,020
Softbank Group Corp	175,000	7,657,003	Tokyo Gas Co Ltd	74,500	1,817,340
Sohgo Security Services Co	9,700	528,401	Tokyu Corp	63,800	1,184,710
Sompo Holdings Inc	43,200	1,708,919	Tokyu Fudosan Holdg Co	86,200	598,066

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Toppan Printing Co Ltd	31,800	661,019	•	_	5,446,731
Topre Corp	7,900	128,741	Norway		
Toray Industries Inc	187,800	1,279,476	Aker Bp Asa	16,306	534,422
Toshiba Corp	66,000	2,247,066	Dnb Asa	121,044	2,259,080
Tosoh Corp	70,300	1,095,173	Dno Asa	323,963	426,369
Toto Ltd	17,400	742,112	Equinor Asa	238,939	4,772,090
Toyo Ink Sc Holdings Co Ltd	6,400	157,004	Gjensidige Forsikring Asa	34,195	716,603
Toyo Seikan Group Holdings	39,800	691,808	Mowi Asa	57,368	1,489,806
Toyo Suisan Kaisha Ltd	15,800	672,418	Norsk Hydro Asa	163,403	606,952
Toyoda Gosei Co Ltd	8,600	217,067	Orkla Asa	128,600	1,301,908
Toyota Boshoku Corp	12,800	207,768	Schibsted Asa	12,244	350,016
Toyota Industries Corp	20,900	1,217,363	Telenor Asa	172,897	3,096,967
Toyota Motor Corp	385,620	27,368,635	Tgs Nopec Geophysical Asa	29,332	891,579
Toyota Tsusho Corp	36,700	1,303,538	Yara International Asa	20,950	870,681
Trend Micro Inc/Japan	27,100	1,396,457			17,316,474
Tsuruha Holdings Inc	4,200	541,449	Singapore		
Ube Industries Ltd	17,700	387,307	Ascendas REIT	414,059	911,475
Unicharm Corp	49,500	1,685,300	Capitaland Commercial Trst	436,081	642,130
Unipres Corp	8,900	126,201	Capitaland Ltd	379,700	1,056,095
Utd Urban Invest Corp	412	771,493	Capitaland Mall Trust	376,200	685,450
Uss Co Ltd	63,600	1,208,502	City Developments Ltd	75,000	610,754
V Technology Co Ltd	4,300	220,391	Comfortdelgro Corp Ltd	778,300	1,371,785
Wakita & Co Ltd	29,600	304,512	Dbs Group Holdings Ltd	398,600	7,671,710
Welcia Holdings Co Ltd	3,300	210,738	Genting Singapore Ltd	646,300	442,194
West Japan Railway Co	22,200	1,928,596	Jardine Cycle & Carriage Ltd	12,088	270,590
Yakult Honsha Co Ltd	15,600	865,590	Keppel Corp Ltd	168,300	846,099
Yamada Denki Co Ltd	102,400	543,683	Mapletree Commercial Trust	244,800	433,290
Yamaha Corp	15,400	861,578	Oversea-Chinese Bank Co	507,067	4,125,469
Yamaha Motor Co Ltd	72,800	1,475,091	Sats Ltd	100,100	376,682
Yamato Holdings Co Ltd	37,700	647,326	Sembcorp Industries Ltd	180,000	305,209
Yamazaki Baking Co Ltd	23,000	412,487	Singapore Airlines Ltd	82,800	556,659
Yaskawa Electric Corp	27,200	1,043,699	Singapore Exchange Ltd	191,600	1,262,466
Yokogawa Electric Corp	29,900	530,730	Singapore Press Holdings Ltd	247,911	398,236
Yokohama Rubber Co Ltd	13,600	266,556	Singapore Tech Eng Ltd	300,500	878,269
Z Holdings Corp	328,800	1,394,771	Singapore Telecom Ltd	2,038,200	5,108,193
Zozo Inc	10,400	199,722	Suntec REIT	360,200	490,214
		540,171,666	United Overseas Bank Ltd	307,763	6,033,265
New Zealand			Uol Group Ltd	76,884	473,431
A2 Milk Co Ltd	101,681	1,029,672	Venture Corp Ltd	36,500	439,471
Auckland Int Airport Ltd	128,678	757,006	Wilmar International Ltd	310,500	951,370
Fisher & Paykel H care Co	62,721	930,924	Yangzijiang Shipbuilding H	381,900	318,096
Fletcher Building Ltd	137,701	469,145			36,658,602
Mercury Nz Ltd	32,970	111,995	Sweden		
Meridian Energy Ltd	230,595	776,299	Alfa Laval Ab	29,140	733,399
Ryman Healthcare Ltd	50,055	549,769	Assa Abloy Ab	237,222	5,544,695
Spark New Zealand Ltd	282,013	821,923	Atlas Copco Ab	152,858	5,807,479

Boliden Ab 36,272 964,820 Kuehne + Nagel Int AG 7,511 1,265,08 Electrolux Ab 30,686 752,313 Lafargeholcim Ltd 61,312 3,400,06 Epiroc Ab 208,425 2,532,104 Lonza Group AG 8,154 2,974,12 Essity Ab 77,234 2,493,322 Nestle Sa 503,695 54,502,12 Hennes & Mauritz Ab 99,424 2,020,757 Novartis AG 390,254 37,032,49 Hexagon Ab 32,832 1,835,019 Pargesa Holding Sa 4,337 360,31 Husqvarna Ab 44,320 354,520 Partners Group Holding AG 2,270 2,080,23 Ica Gruppen Ab 12,773 596,279 Roche Holding AG 129,685 42,052,01 Industrivarden Ab 20,024 483,645 Schindler Holding AG 9,740 2,441,31 Investor Ab 56,590 3,092,756 SGS SA 700 1,915,62
Epiroc Ab 208,425 2,532,104 Lonza Group AG 8,154 2,974,12 Essity Ab 77,234 2,493,322 Nestle Sa 503,695 54,502,12 Hennes & Mauritz Ab 99,424 2,020,757 Novartis AG 390,254 37,032,49 Hexagon Ab 32,832 1,835,019 Pargesa Holding Sa 4,337 360,31 Husqvarna Ab 44,320 354,520 Partners Group Holding AG 2,270 2,080,23 Ica Gruppen Ab 12,773 596,279 Roche Holding AG 129,685 42,052,01 Industrivarden Ab 20,024 483,645 Schindler Holding AG 9,740 2,441,31
Essity Ab 77,234 2,493,322 Nestle Sa 503,695 54,502,12 Hennes & Mauritz Ab 99,424 2,020,757 Novartis AG 390,254 37,032,49 Hexagon Ab 32,832 1,835,019 Pargesa Holding Sa 4,337 360,31 Husqvarna Ab 44,320 354,520 Partners Group Holding AG 2,270 2,080,23 Ica Gruppen Ab 12,773 596,279 Roche Holding AG 129,685 42,052,01 Industrivarden Ab 20,024 483,645 Schindler Holding AG 9,740 2,441,31
Hennes & Mauritz Ab 99,424 2,020,757 Novartis AG 390,254 37,032,49 Hexagon Ab 32,832 1,835,019 Pargesa Holding Sa 4,337 360,31 Husqvarna Ab 44,320 354,520 Partners Group Holding AG 2,270 2,080,23 Ica Gruppen Ab 12,773 596,279 Roche Holding AG 129,685 42,052,01 Industrivarden Ab 20,024 483,645 Schindler Holding AG 9,740 2,441,31
Hexagon Ab 32,832 1,835,019 Pargesa Holding Sa 4,337 360,31 Husqvarna Ab 44,320 354,520 Partners Group Holding AG 2,270 2,080,23 Ica Gruppen Ab 12,773 596,279 Roche Holding AG 129,685 42,052,01 Industrivarden Ab 20,024 483,645 Schindler Holding AG 9,740 2,441,31
Husqvarna Ab 44,320 354,520 Partners Group Holding AG 2,270 2,080,23 Ica Gruppen Ab 12,773 596,279 Roche Holding AG 129,685 42,052,01 Industrivarden Ab 20,024 483,645 Schindler Holding AG 9,740 2,441,31
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Industrivarden Ab 20,024 483,645 Schindler Holding AG 9,740 2,441,31
Investor Ab 56,590 3,092,756 SGS SA 700 1,915,62
Kinnevik Ab 30,759 751,145 Sika AG 16,565 3,110,80
L E Lundbergforetagen Ab 9,870 433,767 Sonova Holding AG 6,943 1,588,13
Lundin Petroleum Ab 23,323 794,039 Straumann Holding AG 1,219 1,196,40
Millicom Int Cellular Sa 9,015 430,476 Swatch Group AG/The 8,790 1,571,88
Nordea Bank Abp 393,890 3,187,374 Swiss Life Holding AG 5,219 2,618,25
Sandvik Ab 170,511 3,317,852 Swiss Prime Site AG 11,268 1,302,10
Securitas Ab 46,921 806,239 Swiss Re AG 43,751 4,911,17
Skandinaviska E Banken Ab 246,469 2,314,863 Swisscom AG 7,287 3,857,40
Skanska Ab 51,978 1,173,816 Temenos AG 6,720 1,062,80
Skf Ab 48,897 988,538 UBS Group AG 474,537 5,988,37
Svenska Handelsbanken Ab 209,429 2,254,017 Vifor Pharma AG 5,957 1,086,69
Swedbank Ab 128,666 1,918,777 Zurich Insurance Group AG 23,921 9,809,49
Swedish Match Ab 32,708 1,681,338 223,636,85
Tele2 Ab 72,957 1,056,822 United Kingdom
Telefonaktiebolaget Ericsson 335,283 2,929,815 3I Group Plc 131,593 1,914,12
Telia Co Ab 378,984 1,631,149 Admiral Group Plc 26,720 817,32
Thule Group Ab 28,191 652,898 Anglo American Plc 166,015 4,776,84
Volvo Ab 195,463 3,278,231 Antofagasta Plc 40,156 487,70
56,812,262 Ashtead Group Plc 57,964 1,853,65
Switzerland Associated British Foods Plc 47,082 1,619,79
ABB Ltd 263,938 6,367,107 Astrazeneca Plc 144,221 14,531,78
Adecco Group AG 21,555 1,362,727 Auto Trader Group Plc 363,446 2,854,18
Alcon Inc 61,240 3,465,638 Aveva Group Plc 7,471 458,63
Ams AG 9,045 366,806 Aviva Plc 707,426 3,923,90
Baloise Holding AG 6,310 1,140,341 Babcock International Group 19,780 164,24
Barry Callebaut AG 277 611,010 Bae Systems Plc 434,174 3,248,57
Chocoladefabriken Lindt&S 175 2,485,582 Barclays Plc 2,617,885 6,229,99
Cie Fin Richemont SA 63,469 4,983,921 Barratt Developments Plc 183,505 1,814,97
Clariant AG 11,836 263,891 Bellway Plc 9,285 468,27
Credit Suisse Group AG 373,232 5,049,142 Berkeley Group Holdings 19,964 1,285,07
Dufry AG 5,154 511,062 Bhp Group Plc 310,107 7,299,35
Ems-Chemie Holding AG 1,154 758,528 Bp Plc 2,624,231 16,394,95
Flughafen Zurich AG 4,925 898,182 British American Tobacco 281,449 12,048,64
Geberit AG 6,698 3,757,269 British Land Co 95,342 804,55
Givaudan Sa 1,260 3,942,581 Britvic Plc 52,449 627,07
Julius Baer Group Ltd 29,986 1,546,135 BT Group Plc 1,070,515 2,729,11

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Bunzl Plc	46,406	1,269,488	Next Plc	29,536	2,745,210
Burberry Group Plc	50,987	1,489,369	Nmc Health Plc	14,123	330,596
Carnival Plc	19,807	954,587	Ocado Group Plc	57,787	974,907
Centrica Plc	1,059,723	1,253,094	Pearson Plc	105,757	892,448
Clinigen Group Plc	9,592	117,476	Persimmon Plc	62,665	2,237,268
Coca-Cola Hbc Ag	24,156	820,818	Playtech Plc	50,017	263,052
Compass Group Plc	221,188	5,538,060	Prudential Plc	361,512	6,925,088
Croda International Plc	16,816	1,139,469	Reckitt Benckiser Group Plc	87,621	7,113,138
Dcc Plc	12,721	1,102,131	Relx Plc	421,937	10,648,216
Diageo Plc	437,736	18,556,519	Rentokil Initial Plc	215,700	1,294,156
Direct Line Insurance	206,145	853,409	Rio Tinto Plc	178,870	10,669,044
Easyjet Plc	37,481	707,059	Rolls-Royce Holdings Plc	184,859	1,673,103
Evraz Plc	59,176	315,847	Rolls-Royce International Ltd	8,503,514	11,265
Experian Plc	114,790	3,880,780	Royal Bank of Scotland G	918,368	2,923,511
Ferguson Plc	31,671	2,873,999	Royal Dutch Shell Plc-A Shs	736,816	21,815,785
Flutter Entertainment Plc	3,952	481,972	Royal Dutch Shell Plc-B Shs	640,994	19,016,882
Forterra Plc	64,039	293,956	Rsa Insurance Group Plc	142,642	1,068,409
G4S Plc	155,656	448,909	Sage Group Plc/The	366,906	3,637,666
Glaxosmithkline Plc	874,568	20,606,591	Schroders Plc	20,578	908,873
Glencore Plc	1,405,835	4,383,115	Segro Plc	150,874	1,792,838
Gvc Holdings Plc	77,262	902,343	Severn Trent Plc	30,001	999,558
Halma Plc	39,807	1,111,640	Smith & Nephew Plc	244,040	5,921,098
Hargreaves Lansdown Plc	36,069	924,113	Smiths Group Plc	53,862	1,202,311
Hsbc Holdings Plc	3,279,754	25,717,212	Spirax-Sarco Engineering	6,767	796,952
Imi Plc	47,917	748,089	Sse Plc	141,593	2,698,273
Imperial Brands Plc	120,090	2,973,380	St James'S Place Plc	66,467	1,023,167
Informa Plc	156,370	1,775,287	Standard Chartered Plc	466,632	4,403,852
Intercontinental Hotels G Plc	20,977	1,446,433	Standard Life Aberdeen Plc	306,382	1,331,692
Intertek Group Plc	44,796	3,470,411	Taylor Wimpey Plc	617,497	1,582,070
Itv Plc	799,285	1,597,810	Tesco Plc	1,218,294	4,115,537
J Sainsbury Plc	243,960	743,005	Tui Ag	57,089	721,044
Jd Sports Fashion Plc	28,154	312,325	Ultra Electronics Holdings	27,925	782,046
Johnson Matthey Plc	27,906	1,106,467	Unilever Plc	209,529	12,075,847
Kingfisher Plc	327,319	940,947	United Utilities Group Plc	88,117	1,101,260
Land Securities Group	93,262	1,222,887	Victrex Plc	10,723	354,280
Legal & General Group	1,022,120	4,102,785	Vodafone Group Plc	3,377,519	6,566,588
Lloyds Banking Group	9,011,215	7,461,010	Weir Group Plc	35,529	710,242
London Stock Exchange	40,270	4,119,511	Whitbread Plc	19,459	1,249,218
M&G Plc	281,537	883,930	WM Morrison Supermarkets	280,694	742,956
Marks & Spencer Group	249,730	706,322	WPP Plc	201,385	2,845,262
Meggitt Plc	98,759	856,159			375,190,835
Melrose Industries Plc	494,382	1,572,494	United States of America		
Micro Focus International	22,930	323,146	3M Co	113,702	20,055,896
Mondi Plc	124,219	2,916,813	Abbott Laboratories	229,540	19,933,254
Moneysupermarket.Com	71,596	313,564	Abbvie Inc	229,361	20,298,449
National Grid Plc	426,758	5,338,582	Abiomed Inc	5,448	929,320

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Accenture Plc	105,620	22,233,010	Ameriprise Financial Inc	27,451	4,572,788
Activision Blizzard Inc	117,315	6,969,684	Amerisourcebergen Corp	19,610	1,666,654
Acuity Brands Inc	5,452	752,321	Ametek Inc	59,410	5,923,771
Adobe Inc	63,227	20,844,045	Amgen Inc	103,989	25,050,950
Advance Auto Parts Inc	8,524	1,364,863	Amphenol Corp	51,355	5,556,097
Advanced Micro Devices	109,277	5,012,536	Analog Devices Inc	40,187	4,774,216
Aercap Holdings Nv	15,841	973,905	Annaly Mortgage Mgmt	226,648	2,130,491
Aes Corp	82,141	1,633,784	Ansys Inc	13,118	3,375,655
Affiliated M Group Inc	6,781	574,622	Antero Resources Corp	14,400	40,896
Aflac Inc	195,029	10,313,134	Anthem Inc	36,613	11,050,536
Agilent Technologies Inc	39,876	3,400,625	Ao Smith Corp	18,620	886,871
Agnc Investment Corp	98,623	1,743,655	Aon Plc	30,770	6,405,699
Air Products & Chemicals	34,001	7,989,215	Apache Corp	50,679	1,296,369
Akamai Technologies Inc	20,261	1,749,537	Apple Hospitality Reit Inc	56,403	917,677
Albemarle Corp	14,413	1,052,437	Apple Inc	642,259	188,419,523
Alexandria Real Estate Eq	13,106	2,117,274	Applied Materials Inc	142,545	8,699,521
Alexion Pharmaceuticals	34,725	3,753,078	Aptiv Plc	32,924	3,125,146
Align Technology Inc	9,381	2,617,674	Aqua America Inc	18,680	876,652
Alleghany Corp	1,849	1,480,106	Aramark	33,451	1,451,439
Allegion Plc	30,748	3,828,126	Arch Capital Group Ltd	53,830	2,309,307
Allergan Plc	41,243	7,876,176	Archer-Daniels-Midland Co	77,612	3,596,540
Alliance Data Systems Co	6,349	712,358	Arconic Inc	42,383	1,303,701
Alliant Energy Corp	34,855	1,906,569	Arista Networks Inc	5,791	1,177,426
Allison Transmission Hldg	27,665	1,336,773	Arrow Electronics Inc	11,971	1,014,423
Allstate Corp/The	51,407	5,778,661	Arthur J Gallagher & Co	22,897	2,179,794
Ally Financial Inc	49,472	1,511,370	Assurant Inc	8,934	1,170,711
Alnylam Pharmaceuticals	10,440	1,202,375	At&T Inc	1,094,545	42,763,873
Alphabet Inc	43,407	58,065,978	Athene Holding Ltd	33,238	1,563,516
Alphabet Inc-Cl C	45,605	60,914,142	Atmos Energy Corp	15,869	1,774,313
Altice Usa Inc	19,128	522,960	Autodesk Inc	23,942	4,392,878
Altria Group Inc	301,830	15,058,299	Autoliv Inc	9,955	840,501
Amazon.Com Inc	51,853	95,767,306	Automatic Data Processing	78,621	13,400,949
Amc Networks Inc	8,600	339,700	Autozone Inc	3,420	4,076,640
Amcor Plc	178,085	1,928,661	Avalonbay Communities Inc.	18,978	3,977,979
Amdocs Ltd	51,397	3,708,294	Avery Dennison Corp	11,789	1,542,119
Amerco	1,164	437,454	Axa Equitable Holdings Inc	46,196	1,144,275
Ameren Corp	35,892	2,755,788	Axalta Coating Systems Ltd	23,275	707,327
American Airlines Group Inc	18,977	544,260	Baker Hughes Co	61,589	1,577,294
American Electric Power Co	63,645	6,012,543	Ball Corp	35,060	2,266,629
American Eq Invest Life H	11,588	346,713	Bank Of America Corp	1,079,106	37,984,531
American Express Co	91,556	11,395,060	Bank of New York Mellon	141,316	7,111,021
American Financial Group	28,650	3,142,046	Baxter International Inc	62,549	5,225,343
American International Group	110,791	5,685,794	Becton Dickinson And Co	33,754	9,175,687
American National Insurance	2,858	335,415	Beigene Ltd	3,676	609,334
American Tower-Reits	48,294	11,089,751	Berkshire Hathaway Inc	190,294	43,088,270
American Water Works Co	23,300	2,861,473	Best Buy Co Inc	33,272	2,921,282

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Biogen Inc	31,868	9,450,137	Cf Industries Holdings Inc	23,007	1,098,584
Biomarin Pharmaceutical Inc	19,237	1,625,911	Ch Robinson Worldwide Inc	48,657	3,802,545
Bio-Rad Laboratories Inc	1,931	714,528	Charles Schwab Corp	129,927	6,176,730
Black Knight Inc	14,135	911,142	Charter Communications Inc	17,072	8,281,286
Blackrock Inc	17,398	8,740,755	Check Point Software	39,898	4,427,082
Blackstone Group Inc	67,581	3,779,805	Cheniere Energy Inc	23,393	1,427,675
Boeing Co/The	61,353	19,978,377	Chevron Corp	258,668	31,156,561
Booking Holdings Inc	4,739	9,730,636	Chipotle Mexican Grill Inc	3,206	2,683,422
Booz Allen Hamilton Hldg	13,120	932,963	Choice Hotels International	9,784	1,011,959
Borgwarner Inc	41,410	1,796,366	Chubb Ltd	71,316	11,095,343
Boston Properties Inc.	20,520	2,826,835	Church & Dwight Co Inc	65,077	4,575,564
Boston Scientific Corp	151,825	6,862,490	Cigna Corp	47,644	9,736,528
Brady Corp	4,200	240,408	Cincinnati Financial Corp	21,230	2,230,848
Bristol-Myers Squibb	44,915	137,889	Cintas Corp	15,236	4,096,808
Bristol-Myers Squibb Co	366,731	23,518,459	Cisco Systems Inc	761,807	36,528,646
British American Tobacco	4,751	201,727	Citigroup Inc	333,585	26,650,106
Broadcom Inc	53,013	16,746,277	Citizens Financial Group Inc	79,606	3,232,004
Broadridge Fin Solutions	35,384	4,369,924	Citrix Systems Inc	28,256	3,133,590
Brown & Brown Inc	9,332	368,427	Clorox Co	32,977	5,061,640
Brown-Forman Corp	46,336	3,130,924	CME Group Inc	50,281	10,088,380
Buckle Inc	16,790	454,002	CMS Energy Corp	41,499	2,606,552
Bunge Ltd	18,139	1,044,081	Coca-Cola Co	698,719	38,660,122
Burlington Stores Inc	7,412	1,689,788	Coca-Cola European Partners	13,438	683,591
Cabot Oil & Gas Corp	43,696	760,747	Cognex Corp	19,567	1,096,535
Cadence Bancorp	23,800	431,494	Cognizant Tech Solutions	101,266	6,280,517
Cadence Design Systems	35,323	2,450,003	Colgate-Palmolive Co	155,962	10,733,305
Callon Petroleum Co	73,600	355,488	Comcast Corp	603,414	27,123,459
Camden Property Trust	10,568	1,121,053	Comerica Inc	28,186	2,022,064
Campbell Soup Co	23,380	1,155,206	Conagra Brands Inc	62,892	2,152,793
Capital One Financial Co	73,618	7,573,820	Concho Resources Inc	25,163	2,202,769
Capri Holdings Ltd	30,320	1,156,405	Conoco phillips	142,130	9,239,871
Cardinal Health Inc	36,638	1,852,784	Consolidated Edison Inc	47,080	4,257,444
Carmax Inc	20,617	1,807,492	Constellation Brands Inc	20,472	3,882,720
Carnival Corp	54,073	2,747,990	Continental Resources Inc	9,730	333,934
Carter'S Inc	7,534	823,843	Cooper Cos Inc	6,056	1,945,187
Caterpillar Inc	62,795	9,270,426	Copart Inc	31,757	2,887,346
Cboe Global Markets Inc	14,551	1,744,228	Corning Inc	100,668	2,929,439
Cbre Group Inc	47,801	2,928,289	Corteva Inc	81,556	2,409,980
Cbs Corp	92,397	3,877,902	Costar Group Inc	4,439	2,655,721
Cdk Global Inc	13,158	719,479	Costco Wholesale Corp	68,347	20,081,716
Cdw Corp	18,686	2,667,987	Coty Inc	39,516	444,160
Celanese Corp	28,152	3,466,074	Crown Castle International	52,347	7,438,509
Centene Corp	51,482	3,235,129	Crown Holdings Inc	16,119	1,169,272
Centerpoint Energy Inc	61,093	1,664,784	Csw Industrials Inc	5,100	392,445
Centurylink Inc	118,959	1,571,448	Csx Corp	115,733	8,374,440
Cerner Corp	40,067	2,938,914	Cummins Inc	32,098	5,742,653

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Curtiss-Wright Corp	13,869	1,954,558	Eli Lilly & Co	152,677	20,054,124
Cvs Health Corp	162,513	12,068,215	Emerson Electric Co	112,384	8,569,280
Cyberark Software Ltd	4,893	570,377	Ennis Inc	7,000	151,410
Dairy Farm Int Holdings Ltd	44,400	253,524	Entegris Inc	7,827	392,054
Danaher Corp	89,267	13,700,699	Entergy Corp	23,635	2,830,055
Darden Restaurants Inc	14,774	1,610,218	Eog Resources Inc	63,249	5,295,206
Davita Inc	15,317	1,148,775	Epam Systems Inc	5,085	1,079,190
Deere & Co	33,429	5,789,569	Equifax Inc	13,145	1,841,483
Dell Technologies Inc	18,652	958,526	Equinix Inc	9,098	5,303,497
Delta Air Lines Inc	35,410	2,069,715	Equity Lifestyle Properties	19,592	1,379,081
Deluxe Corp	22,500	1,123,425	Equity Residential	46,467	3,757,786
Dentsply Sirona Inc	22,605	1,278,313	Erie Indemnity Co	2,434	404,044
Devon Energy Corp	52,426	1,361,503	Essex Property Trust Inc	12,044	3,621,510
Dexcom Inc	10,295	2,252,031	Estee Lauder Cos Inc	33,069	6,825,111
Diamond Offshore Drilling	37,200	267,096	Evercore Inc	5,209	389,425
Diamondback Energy Inc	16,913	1,569,696	Everest Re Group Ltd	5,246	1,452,303
Digital Realty Trust Inc	25,650	3,070,305	Evergy Inc	34,981	2,276,913
Discover Financial Services	41,771	3,542,181	Eversource Energy	44,358	3,771,761
Discovery Inc	72,904	2,312,650	Exact Sciences Corp	13,690	1,265,641
Dish Network Corp	26,755	948,465	Exelon Corp	144,845	6,600,587
Docusign Inc	10,958	811,659	Expedia Group Inc	14,524	1,570,625
Dollar General Corp	33,356	5,200,868	Expeditors In of Washington	55,108	4,296,771
Dollar Tree Inc	29,646	2,787,613	Extra Space Storage Inc	17,326	1,829,452
Dominion Energy Inc	101,244	8,381,991	Exxon Mobil Corp	634,464	44,253,864
Domino'S Pizza Inc	5,216	1,532,878	F5 Networks Inc	7,694	1,074,236
Donaldson Co Inc	31,106	1,792,328	Facebook Inc	324,768	66,603,421
Dover Corp	27,229	3,138,142	Factset Research Systems	8,178	2,194,403
Dow Inc	83,469	4,567,424	Fastenal Co	124,999	4,617,463
Dr Horton Inc	43,661	2,302,245	Federal Realty Invest Trust	10,508	1,352,275
Dropbox Inc	12,257	219,400	Federated Investors Inc	30,390	989,802
Dte Energy Co	26,486	3,438,942	Fedex Corp	31,087	4,699,422
Duke Energy Corp	103,935	9,475,754	Fidelity National Financial	37,579	1,703,456
Duke Realty Corporation	47,716	1,653,359	Fidelity Nat Info Services	103,672	14,414,555
Dupont De Nemours Inc	81,656	5,239,049	Fifth Third Bancorp	96,313	2,959,698
Dxc Technology Co	42,491	1,597,237	First American Financial Co	14,481	844,532
E*Trade Financial Corp	31,948	1,449,481	First Citizens Bancshares	600	319,320
East West Bancorp Inc	16,511	803,755	First Interstate Bancsystem	5,700	238,830
Eastman Chemical Co	26,520	2,101,445	First Republic Bank	21,384	2,511,551
Eaton Corp Plc	55,063	5,214,466	Firstenergy Corp	64,652	3,141,441
Eaton Vance Corp	27,637	1,290,648	Fiserv Inc	94,674	10,940,527
Ebay Inc	191,749	6,924,056	Fleetcor Technologies Inc	9,596	2,760,097
Ecolab Inc	33,700	6,501,404	Flex Ltd	60,485	763,321
Edison International	42,292	3,187,548	Flir Systems Inc	38,287	1,992,838
Edwards Lifesciences Corp	31,502	7,345,951	Flowserve Corp	14,884	740,777
Elanco Animal Health Inc	37,587	1,106,937	Fmc Corp	15,065	1,503,487
Electronic Arts Inc	38,107	4,095,359	Ford Motor Co	480,247	4,456,692

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Fortinet Inc	17,602	1,878,133	Host Hotels and Resorts	94,513	1,753,216
Fortive Corp	37,359	2,853,107	Hp Inc	253,272	5,199,674
Fortune Brands H & S Inc	17,374	1,135,043	Hubbell Inc	16,595	2,453,239
Fox Corp	103,854	3,835,770	Humana Inc	17,112	6,269,495
Franklin Resources Inc	64,458	1,674,619	Huntington Bancshares Inc	126,285	1,901,852
Freeport-Mcmoran Inc	177,358	2,326,937	Huntington Ingalls Industries	5,459	1,369,499
GAP Inc	54,910	970,809	Huntsman Corp	9,900	239,085
Garmin Ltd	34,873	3,400,815	Iac/Interactivecorp	8,487	2,114,197
Gartner Inc	9,664	1,488,836	Idex Corp	14,362	2,469,690
General Dynamics Co	34,534	6,089,035	Idexx Laboratories Inc	9,439	2,462,918
General Electric Co	1,088,696	12,138,960	Ihs Markit Ltd	48,757	3,672,377
General Mills Inc	83,898	4,492,738	Illinois Tool Works Inc	61,708	11,080,906
General Motors Co	160,070	5,858,562	Illumina Inc	16,142	5,352,526
Gentex Corp	61,728	1,788,877	Incyte Corp	19,719	1,721,074
Genuine Parts Co	19,827	2,106,024	Ingersoll-Rand Plc	30,779	4,090,221
Gilead Sciences Inc	196,834	12,788,305	Ingredion Inc	17,633	1,638,987
Global Payments Inc	32,143	5,868,026	Insight Enterprises Inc	4,065	285,729
Globe Life Inc	23,156	2,437,169	Insulet Corp	6,677	1,142,835
Godaddy Inc	17,960	1,219,843	Intel Corp	776,834	46,462,442
Goldman Sachs Group Inc	50,555	11,618,550	Intercontinental Exchange	72,286	6,688,624
Graco Inc	11,600	603,316	IBM Corp	166,333	22,283,632
Graftech International Ltd	35,600	413,316	Int Flavors & Fragrances	12,280	1,584,366
Grubhub Inc	10,311	501,218	International Paper Co	46,815	2,155,363
Guidewire Software Inc	7,381	810,212	Interpublic Group of Cos	48,146	1,111,691
H&R Block Inc	83,200	1,953,536	Intuit Inc	38,936	10,193,834
Halliburton Co	94,971	2,322,991	Intuitive Surgical Inc	14,335	8,469,405
Hanesbrands Inc	47,068	698,489	Invesco Ltd	83,082	1,492,984
Harley-Davidson Inc	24,591	914,293	Invitation Homes Inc	47,389	1,419,301
Hartford Fin Services G	50,243	3,051,760	Ionis Pharmaceuticals Inc	16,258	981,333
Hasbro Inc	22,825	2,410,320	Ipg Photonics Corp	4,129	598,210
Hca Healthcare Inc	34,385	5,080,384	Iqvia Holdings Inc	17,964	2,774,540
Hd Supply Holdings Inc	21,923	881,743	Iron Mtn Inc	35,934	1,144,498
Healthpeak Properties Inc	58,004	1,998,238	Ituran Location and Control	7,300	183,449
Heico Corp	11,611	1,166,086	Jack Henry & Associates	14,665	2,136,251
Henry Schein Inc	22,571	1,505,034	Jacobs Engineering Group	18,497	1,661,586
Hershey Co/The	39,904	5,863,494	Jardine Matheson Holdings	35,600	1,979,360
Hess Corp	29,226	1,952,297	Jardine Strategic Holdings	28,900	885,785
Hewlett Packard Ent Co	170,102	2,696,117	Jazz Pharmaceuticals Plc	12,674	1,891,975
Highwoods Properties Inc	12,430	607,827	Jb Hunt Transport Services	11,901	1,389,442
Hilton Worldwide Holdings	30,563	3,389,131	Jefferies Financial Group	33,424	714,271
Hollyfrontier Co	31,541	1,599,444	Jm Smucker Co	15,907	1,655,760
Hologic Inc	29,298	1,529,356	Johnson & Johnson	449,929	65,590,650
Home Depot Inc	163,824	35,752,950	Johnson International Plc	102,870	4,185,780
Honeywell International Inc	116,972	20,701,705	Jones Lang Lasalle Inc	6,164	1,073,276
Hongkong Land Holdings	166,100	955,075	Jpmorgan Chase & Co	473,317	65,966,190
Hormel Foods Corp	83,872	3,782,627	Juniper Networks Inc	39,359	969,412

Kansas City Southern 12,733 1,949,677 Market Corp 1,842 2,103,64 Kellogg Co 34,418 2,280,349 Marketases Holdings 4,132 1,566,111 Keyeopen 128,685 2,603,289 Marrior International 31,625 4,787,706 Keysight Technologies Inc 20,411 2,056,006 Marrior Marietta Materials 8,828 1,909,109 Kimberty-Clark Corp 72,239 9,943,407 Marrior Marietta Materials 8,828 1,909,109 Kimberty-Clark Corp 72,259 9,943,407 Marrior Mortal Mariett Materials 8,828 1,909,109 Kind Corp 21,460 4,643,774 Masco Corp 37,006 1,775,918 Kiz & Co Inc 22,766 1,530,300 Mastercard Inc 122,726 26,909,703 Kin Corp 22,908 1,065,054 Maxim Integrated Products 66,697 4,102,532 Kraff Heinz Co 82,111 2,641,7518 Mache Corup Inc 64,614 97,205 Expert Ene Co 10,002,29 2,916,228 Medioral Treporties Trust Inc	Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Kellogg Co 34,418 2,380,349 Marketaxess Holdings 4,132 1,566,111 Keyseight Technologies Ine 126,685 2,063,208 Marroit International 31,625 4,787,076 Kimberly-Clark Corp 72,239 9,934,307 Martin Marietta Materials 6,828 1,909,109 Kimoc Realty Corporation 54,467 1,128,012 Marvell Technology Group 6,828 1,909,109 Kime Corp 22,946 4,641,774 Masco Corp 37,006 1,757,918 Kin Corp 25,928 4,617,518 Mater Group Inc 6,437 350,443 Kolf SCorp 25,928 4,617,518 Mater Group Inc 6,437 350,443 Kolf SCorp 29,988 1,65,554 Materian Maxim Integrated Products 66,697 4,102,532 Kraft Hoinz Co 82,311 2,643,829 Mecromick & Corp 114,907 22,098,729 Laboratory Co of Amea II 12,581 2,127,447 Medical Properties Trust Inc. 46,114 973,000 Lam Research Corp 21,819 6,379,876 Meditorial Pr	·	ĕ		•	o o	
Keysight Technologies Inc 2,041 2,056,006 Marsin & Medeman Cos 7,064 7,867,139 Kimberly-Clark Corp 72,239 9,934,307 Marsin Mariett Materials 6,288 1,090,100 Kimoe Really Corporation 94,467 1,128,012 Marvell Technology Group 67,859 1,001,666 Kin & Co Ine 25,766 1,536,380 Master and Inc. 212,726 63,690,703 Kin & Co Ine 25,728 1,617,518 Match Group Inc 6,657 4,102,532 Kraft Heinz Co 82,311 2,613,829 Mectomate's Co Inc. 11,109 2,2564,602 Kroger Co 100,629 2,916,228 Mectomate's Corp 11,190 2,234,102 3,236,943 Laboratory Co of Amea H 12,581 2,127,447 Medical Properties Trust Inc. 46,114 973,000 Lam Research Corp 21,819 6,379,876 Medronic Ple 25,114 973,000 Lam Research Corp 21,819 6,379,876 Medronic Ple 25,114 973,000 Lam Weston Holdings 65,00 1,809,833	•	34,418	2,380,349	•	4,132	
Kmberly-Clark Corp 72,239 9,934,307 Martin Marietta Materials 6,828 1,909,109 Kimoe Realty Corporation 34,467 1,128,012 Marcell Technology Group 67,879 1,501,656 Kinder Mongan Inc 219,460 4,643,774 Masco Corp 37,006 177,5918 Kir & Co Inc 25,206 1,336,380 Masternatine 123,726 36,908,703 Kin Corp 25,298 4,175,181 Match Group Inc 6,657 4,304,43 Kohl'S Corp 22,908 4,175,188 Machin Group Inc 6,667 4,104,43 Kraff Heinz Co 32,311 2,243,829 Mecomick & Co Inc 15,109 22,668,022 Krager Co 100,629 2,916,228 Medoand'S Corp 114,907 22,698,729 Lal Harbindry Co of Armai II 12,581 4,178 3,716 Medoand'S Corp 24,11 237,109 Lamb Weston Holdings 3,688 3,173,106 Medoanties Route 4,138 2,122,124 Lamb Weston Holdings 6,510 180,833 Mercab Corp <th< td=""><td>Keycorp</td><td>128,685</td><td>2,603,298</td><td>Marriott International</td><td>31,625</td><td>4,787,076</td></th<>	Keycorp	128,685	2,603,298	Marriott International	31,625	4,787,076
Kimco Realty Corporation 54,467 1,128,012 Marvell Technology Group 67,859 1,301,656 Kinder Morgan Ine 219,400 4,461,774 Masco Corp 37,006 1,775,918 Kin & Con 25,206 1,536,380 Masterward Inc 123,26 36,087,087 Kin Corp 25,293 4,467,518 Match Group Inc 6,697 4,102,332 Kraft Heinz Co 82,311 2,643,829 Mecomatic Scorp 114,907 22,686,602 Krager Co 100,629 2,916,228 MecloandSt Corp 114,907 22,687,28 Laboratory Co of Amea H 12,881 2,127,477 Medical Properties Trust Inc 46,114 973,003 Lam Research Corp 21,819 6,379,876 Meditonic Pic 245,142 27,791,013 Lam Mestarch Sorp 16,400 1,869,928 Mercadolibre Inc 4,758 2,721,243 Lardor Petrolcum Ine 65,100 180,837 Merca & Co Inc 313,373 6,815,238 Lars Op 16,521 2,266,818 Mgm Resorts International 4,734 <td>Keysight Technologies Inc</td> <td>20,041</td> <td>2,056,006</td> <td>Marsh & Mclennan Cos</td> <td>70,646</td> <td>7,867,139</td>	Keysight Technologies Inc	20,041	2,056,006	Marsh & Mclennan Cos	70,646	7,867,139
Kinder Morgan Inc 219,460 4,643,774 Massoc Corp 37,006 1,775,918 Kix & Co Inc 25,706 1,556,380 Mastereard Inc 23,726 36,698,703 Kla Corp 25,928 4,617,518 Match Group Inc 6,667 30,433 Koth'S Corp 20,908 1,065,054 Maxim Integrated Products 66,697 4,102,532 Kroger Co 100,629 2,916,228 Medonald'S Corp 114,907 22,569,729 Laboratory Co of Amea H 12,818 2,127,447 Medical Properties Trust Inc. 46,114 973,030 Lam Research Corp 21,819 6,379,876 Medronic Ple 245,142 27,799,103 Lamb Weston Holdings 36,888 3,173,106 Meloc Resorts & Entert Ltd 20,002 498,156 Landstar System Inc 16,400 186,837 Mercadoliter 4,758 22,12,123 Larard Ltd 3,600 143,878 Mercadoliter 4,758 36,831,147 Laar Corp 16,522 2,266,818 Mgm Resorts International 4,578 <td< td=""><td>Kimberly-Clark Corp</td><td>72,239</td><td>9,934,307</td><td>Martin Marietta Materials</td><td>6,828</td><td>1,909,109</td></td<>	Kimberly-Clark Corp	72,239	9,934,307	Martin Marietta Materials	6,828	1,909,109
Klr & Co Inc 52,706 1,536,380 Mastercard Inc 123,726 36,908,703 Kla Corp 25,928 4,617,518 Match Group Inc 6,457 530,433 Knd SCorp 20,908 1,065,054 Maxim Integrated Products 66,697 4,102,532 Kraft Heinz Co 82,311 2,643,829 Mecormick & Co Inc 15,109 2,266,872 L3Hiarris Technologies 24,209 4,787,088 Meckesson Corp 23,412 22,508,729 L3Hiarris Technologies 24,219 4,787,888 Meckesson Corp 234,11 973,006 Lam Research Corp 21,819 6,379,876 Meditronic Ple 245,142 227,799,103 Lam Research Holdings 36,888 3,173,106 Meleton Eventric Enter Ltd 20,002 498,156 Landstar System Inc 65,100 186,873 Mercadolibre Inc 4,758 27,721,214 Larded Petroleum Inc 65,100 186,873 Merck & O Inc 40,16 36,873,144 Laard Law Corp 16,522 22,668,18 Meltife Inc 133,737	Kimco Realty Corporation	54,467	1,128,012	Marvell Technology Group	67,859	1,801,656
Kln Corp 25,928 4,617,518 Match Group Inc 6,457 530,443 Kohlts Corp 29,088 1,065,054 Maxim Integrated Products 66,697 4,102,522 Kraft Heinz Co 82,311 2,643,829 Mecornick & Co Inc 15,109 22,696,602 Kroger Co 100,629 2,916,228 Mectonald'S Corp 114,907 22,698,739 Laboratory Co of Amea H 12,581 2,127,447 Medical Properties Trust Inc 46,114 973,005 Lam Research Corp 21,819 6,379,876 Medicronic Pic 245,142 225,104 279,102 Lam Weston Holdings 36,888 3,173,106 Melos Resorts & Entert Ltd 20,602 498,156 Lamb Weston Holdings 6,100 1,869,928 Merceadolibre Inc 4,758 2,721,243 Lardo Petroleum Inc 65,100 1,869,928 Merce & Co Inc 405,100 36,837,147 Las Vegas Sands Corp 41,137 3,045,894 Mettlie Inc 4,758 2,721,243 Lared Petroleum Inc 65,210 3,608 143,2	Kinder Morgan Inc	219,460	4,643,774	Masco Corp	37,006	1,775,918
Kohl'S Corp 20,908 1,065,054 Maxim Integrated Products 66,697 4,102,532 Kraft Heinz Co 82,311 2,648,829 Mectornick & Co Ine 15,109 2,564,602 Kroger Co 100,629 2,916,228 Medonald'S Corp 114,907 22,698,729 Laboratory Co of Amea H 12,581 2,127,447 Medical Properties Trust Ine. 46,114 973,005 Lam Research Corp 21,819 6,379,876 Medtronic Ple 245,142 22,799,103 Lamb Weston Holdings 16,640 1,869,938 Mercadolibre Ine 47,878 2,272,1243 Larded Petroleum Inc 65,100 186,837 Merck & Co Ine 405,160 36,837,147 Las Vegas Sands Corp 44,137 3,945,894 Mettlier Ine 133,737 6,815,238 Lared Torp 16,522 2,266,818 Megm Resorts International 4,344 3,744,48 Leidos Holdings Ine 16,839 1,488,033 Microship Technology Ine 25,692 2,690,723 Leidos Holdings Ine 16,8239 1,488,033 Micro	Kkr & Co Inc	52,706	1,536,380	Mastercard Inc	123,726	36,908,703
Kriff Heinz Co 82,311 2,643,829 Mecormick & Co Inc 15,109 2,564,602 Kroger Co 100,629 2,916,228 Medonald'S Corp 114,907 22,698,729 L3Harris Technologies 24,09 4,787,088 Mekesson Corp 33,412 3,236,943 Lam Research Corp 21,819 6,379,876 Medicial Properties Trust Inc. 44,114 973,005 Lam Weston Holdings 36,888 3,173,106 Melco Resorts & Entert Ltd 20,602 498,156 Landstar System Inc 16,000 186,837 Mercadolibre Inc 4,758 2,721,243 Larded Petroleum Inc 65,100 186,837 Mercadolibre Inc 405,100 36,837,147 Las Vegas Sands Corp 44,137 3,045,894 Mettlie Inc 133,737 6,815,238 Lazard Ltd 3,600 143,784 Mettlie Inc 133,737 6,815,238 Lazard Ltd 3,660 143,784 Mettlie Inc 133,737 6,815,238 Lazard Ltd 3,691 1,648,033 Micros Focus International 4,58	Kla Corp	25,928	4,617,518	Match Group Inc	6,457	530,443
Kroger Co 100,629 2,916,228 Medonald'S Corp 114,907 22,698,729 L 3Harris Technologies 24,209 4,787,088 Mckesson Corp 23,412 3,236,943 Laboratory Co of Amea H 12,581 2,127,447 Medical Properties Trust Inc. 46,114 973,005 Lam Research Corp 21,819 6,379,876 Medtronic Ptc 245,142 27,799,03 Lamb Weston Holdings 36,888 3,173,106 Medeo Resorts & Entert Ltd 40,002 48,156 Landstar System Inc 16,400 1,869,928 Mercadolibre Inc 4,758 2,721,243 Lardo Petrolcum Inc 65,100 186,837 Mcrek & Co Inc 405,160 36,837,147 Las Vegas Sands Corp 44,137 3,045,894 Metlife Inc 133,373 6,812,338 Lazerd Ltd 3,600 143,784 Metlife Inc 133,373 6,812,338 Lazard Ltd 3,600 143,784 Metler Inc 13,343 3,517,448 Leades Platt Inc 17,477 888,181 Micro Theology Inc 25,692	Kohl'S Corp	20,908	1,065,054	Maxim Integrated Products	66,697	4,102,532
L3Harris Technologies 24,209 4,787,088 Mckesson Corp 23,412 3,236,943 Laboratory Co of Amea H 12,581 2,127,447 Medical Properties Trust Inc. 46,114 973,005 Lam Research Corp 21,819 6,379,876 Medronic Ple 2245,142 27,799,103 Lamb Weston Holdings 36,888 3,173,106 Melco Resorts & Entert Ltd 20,602 498,156 Landstar System Inc 16,600 18,699,288 Mercadolibre Inc 4,758 2,721,243 Larded Petroleum Inc 65,100 186,837 Merck & Co Inc 405,160 36,837,147 Las Vegas Sands Corp 44,137 3,045,894 Mettler-Toledo International 4,43 3,517,448 Laer Corp 16,522 2,266,818 Mgm Resorts International 14,43 3,517,448 Legett & Platt Inc 17,477 888,181 Micro-Focus International 14,58 204,996 Leidos Holdings Inc 16,839 1,648,033 Micro-Focus International 14,58 20,990,723 Lemnar Corp 35,691 1,990,844<	Kraft Heinz Co	82,311	2,643,829	Mccormick & Co Inc	15,109	2,564,602
Laboratory Co of Amea H 12,581 2,127,447 Medical Properties Trust Inc. 46,114 973,005 Lam Research Corp 21,819 6,379,876 Meditronic Plc 245,142 27,799,103 Lamb Weston Holdings 36,888 3,173,106 Melco Resorts & Entert Ltd 20,002 498,156 Landstar System Inc 16,600 1868,837 Mercadolibre Inc 47,58 2,721,243 Larder Detroleum Inc 65,100 1868,837 Mercadolibre Inc 405,160 36,837,147 Last Vegas Sands Corp 44,137 3,045,894 Mettlife Inc 133,737 6,815,238 Lazard Ltd 3,600 143,784 Mettlife Inc 133,737 6,815,238 Leagett & Platt Inc 17,477 888,181 Micro Focus International 4,344 3,517,448 Leigett & Platt Inc 17,477 888,181 Micro Focus International 14,586 20,496 Leigett & Platt Inc 14,829 1,178,469 Micro Focus International 14,586 2,690,723 Lennar Corp 35,691 1,428,723 <t< td=""><td>Kroger Co</td><td>100,629</td><td>2,916,228</td><td>Mcdonald'S Corp</td><td>114,907</td><td>22,698,729</td></t<>	Kroger Co	100,629	2,916,228	Mcdonald'S Corp	114,907	22,698,729
Lam Research Corp 21,819 6,379,876 Medtronic Pic 245,142 27,799,103 Lamb Weston Holdings 36,888 3,173,106 Melco Resorts & Entert Ltd 20,602 498,156 Landstar System Inc 16,400 1,869,928 Mercadolibre Inc 4,758 2,721,243 Larded Detroleum Inc 65,100 186,837 Merck & Co Inc 405,160 36,837,147 Las Vegas Sands Corp 44,137 3,045,894 Mettlier Inc 133,737 6,815,238 Lazard Ltd 3,600 143,784 Mettlier Toledo International 4,434 3,517,448 Lear Corp 16,522 2,266,818 Mgm Resorts International 14,586 204,96 Leidos Holdings Inc 16,839 1,648,033 Microsen Corp 25,692 2,690,723 Lennar Corp 35,691 1,990,844 Microsen Corp 168,240 9,044,582 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099,244,582 Liberty Broadband Corp 21,358 1,428,723 Mid-America Apart Comm <	L3Harris Technologies	24,209	4,787,088	Mckesson Corp	23,412	3,236,943
Lamb Weston Holdings 36,888 3,173,106 Melco Resorts & Entert Ltd 20,602 498,156 Landstar System Inc 16,400 1,869,928 Mercadolibre Inc 4,758 2,721,243 Lardeo Petroleum Inc 65,100 186,837 Merck & Co Inc 405,160 36,837,147 Las Vegas Sands Corp 44,137 3,045,894 Mettlife Inc 133,737 6,815,238 Lazard Ltd 3,600 143,784 Mettler-Toledo International 4,434 3,517,448 Lear Corp 16,522 2,266,818 Mgm Resorts International 52,570 1,748,478 Leigett & Platt Inc 17,477 888,181 Micro Focus International 14,586 204,496 Leidos Holdings Inc 16,839 1,648,033 Microchip Technology Inc 25,692 2,690,723 Lennax International Inc 4,829 1,178,469 Microsoft Corp 1060,212 166,962,186 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Corm 14,099 1,858,671 Liberty Bodiba Crop 22,782 1,047,061 </td <td>Laboratory Co of Amca H</td> <td>12,581</td> <td>2,127,447</td> <td>Medical Properties Trust Inc.</td> <td>46,114</td> <td>973,005</td>	Laboratory Co of Amca H	12,581	2,127,447	Medical Properties Trust Inc.	46,114	973,005
Landstar System Inc 16,400 1,869,928 Mereadolibre Inc 4,758 2,721,243 Laredo Petroleum Inc 65,100 186,837 Merek & Co Inc 405,160 36,837,147 Las Vegas Sands Corp 44,137 3,045,894 Metlife Inc 133,737 6,815,238 Lazard Ltd 3,600 143,784 Metlife Inc 133,737 6,815,238 Lear Corp 16,522 2,266,818 Mgm Resorts International 4,434 3,517,448 Leagett & Platt Inc 17,477 888,181 Micro Focus International 14,586 20,496 Leigett & Platt Inc 16,839 1,648,033 Microsoft Corp tenhology Inc 25,692 2,690,723 Lennar Corp 35,691 1,990,844 Microsoft Corp 1,060,212 166,962,186 Liberty Broadband Corp 11,388 1,428,723 Microsoft Corp 1,060,212 166,962,186 Liberty Broadband Corp 22,782 1,736,363 Mid-America Apart Comm 14,099 1,888,671 Liberty Broadband Corp 22,782 1,047,061 Mohawk In	Lam Research Corp	21,819	6,379,876	Medtronic Plc	245,142	27,799,103
Laredo Perfoleum Inc 65,100 186,837 Merck & Co Inc 405,160 36,837,147 Las Vegas Sands Corp 44,137 3,045,894 Metlife Inc 133,737 6,815,238 Lazard Ltd 3,600 143,784 Mettler-Toledo International 4,434 3,517,448 Lear Corp 16,522 2,266,818 Mgm Resorts International 52,570 1,748,478 Legett & Platt Inc 17,477 888,181 Micro Focus International 25,592 2,690,732 Leidos Holdings Inc 16,839 1,648,033 Microsoft Echnology Inc 168,240 9,044,582 Lennar Corp 35,691 1,990,844 Microsoft Corp 1,060,212 166,962,186 Liberty Broadband Corp 11,358 1,428,723 Microsoft Corp 1,060,212 166,962,186 Liberty Global Ptc 78,865 1,736,363 Micdleby Corp 7,211 789,749 Liberty Wedia Corp 22,782 1,047,061 Mohawk Industries Inc 7,40 1,055,349 Liberty Wedia Corp 15,300 169,983 Mondelez Inter	Lamb Weston Holdings	36,888	3,173,106	Melco Resorts & Entert Ltd	20,602	498,156
Las Vegas Sands Corp 44,137 3,045,894 Metilife Ine 133,737 6,815,238 Lazard Ltd 3,600 143,784 Mettler-Toledo International 4,434 3,517,448 Lear Corp 16,522 2,266,818 Mgm Resorts International 15,570 1,748,478 Legett & Platt Ine 17,477 888,181 Micro Focus International 14,586 204,496 Leidos Holdings Ine 16,839 1,648,033 Microchip Technology Ine 25,692 2,690,723 Lennar Corp 35,691 1,990,844 Microo Technology Ine 168,240 9,044,582 Lennar Corp 11,358 1,428,723 Mid-Corp Technology Ine 16,8240 9,044,582 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,671 Liberty Broadband Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 Liberty Wedia Corp 22,782 1,047,061 Mohawk Industries Inc 7,40 1,055,349 Liberty Strius Water 21,295 1,278,978	Landstar System Inc	16,400	1,869,928	Mercadolibre Inc	4,758	2,721,243
Lazard Lid 3,600 143,784 Mettler-Toledo International 4,434 3,517,484 Lear Corp 16,522 2,266,818 Mgm Resorts International 52,570 1,748,478 Leggett & Platt Ine 17,477 888,181 Micro Focus International 14,586 204,496 Leidos Holdings Ine 16,839 1,648,033 Microchip Technology Ine 25,692 2,690,723 Lennar Corp 35,691 1,990,844 Microsoft Corp 168,240 9,044,586 Lennox International Ine 4,829 1,178,469 Microsoft Corp 1,669,621,86 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,671 Liberty Global Ple 78,865 1,730,3363 Middleby Corp 7,211 789,749 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 Liberty Diffield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,98 Mongodb	Laredo Petroleum Inc	65,100	186,837	Merck & Co Inc	405,160	36,837,147
Lear Corp 16,522 2,266,818 Mgm Resorts International 52,570 1,748,78 Leggett & Platt Inc 17,477 888,181 Micro Focus International 14,586 204,496 Leidos Holdings Inc 16,839 1,648,033 Micro Focus International 25,692 2,690,723 Lennar Corp 35,691 1,990,844 Micro Technology Inc 168,240 9,044,582 Lennar Corp 35,691 1,990,844 Microsoft Corp 1,060,212 166,962,186 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,671 Liberty Global Plc 78,865 1,736,363 Middleby Corp 7,211 789,749 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 Liberty Wedia Corp 22,782 1,047,061 Mohawk Industries Inc 7,211 789,749 Liberty Wedia Corp 22,782 1,047,061 Mohawk Industries Inc 7,211 1,055,349 Liberty Wedia Corp 22,782 1,278,978 Mon	Las Vegas Sands Corp	44,137	3,045,894	Metlife Inc	133,737	6,815,238
Leggett & Platt Inc 17,477 888,181 Micro Focus International 14,586 204,996 Leidos Holdings Inc 16,839 1,648,033 Microchip Technology Inc 25,692 2,690,723 Lennar Corp 35,691 1,990,844 Microsoft Corp 10,60,212 166,962,186 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,671 Liberty Broadband Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 Liberty Polifield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Live Nation Entertainment 17,120 <	Lazard Ltd	3,600	143,784	Mettler-Toledo International	4,434	3,517,448
Leidos Holdings Inc 16,839 1,648,033 Microchip Technology Inc 25,692 2,690,723 Lennar Corp 35,691 1,990,844 Micros Technology Inc 168,240 9,044,582 Lennox International Inc 4,829 1,178,469 Microsoft Corp 1,060,212 166,962,186 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,671 Liberty Global Plc 78,865 1,736,363 Middleby Corp 7,211 789,749 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 LiM Corp-Lbty Siriusxm 26,023 1,253,850 Molson Coors Beverage Co 24,348 1,312,357 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Lire Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Linde Plc 59,722 12,704,064	Lear Corp	16,522	2,266,818	Mgm Resorts International	52,570	1,748,478
Lennar Corp 35,691 1,990,844 Micron Technology Inc 168,240 9,044,582 Lennox International Inc 4,829 1,178,469 Microsoft Corp 1,060,212 166,962,186 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,671 Liberty Global Plc 78,865 1,736,363 Middleby Corp 7,211 789,749 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 Liberty Oilfield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Ine 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Mot	Leggett & Platt Inc	17,477	888,181	Micro Focus International	14,586	204,496
Lennox International Inc 4,829 1,178,469 Microsoft Corp 1,060,212 166,962,186 Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,671 Liberty Global Ple 78,865 1,736,363 Middleby Corp 7,211 789,749 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 Liberty Oilfield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msc In	Leidos Holdings Inc	16,839	1,648,033	Microchip Technology Inc	25,692	2,690,723
Liberty Broadband Corp 11,358 1,428,723 Mid-America Apart Comm 14,099 1,858,67 Liberty Global Plc 78,865 1,736,363 Middleby Corp 7,211 789,749 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 LM Corp-Lbty Siriusxm 26,023 1,253,850 Molson Coors Beverage Co 24,348 1,312,357 Liberty Oilfield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa	Lennar Corp	35,691	1,990,844	Micron Technology Inc	168,240	9,044,582
Liberty Global Plc 78,865 1,736,363 Middleby Corp 7,211 789,749 Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 LM Corp-Lbty Siriusxm 26,023 1,253,850 Molson Coors Beverage Co 24,348 1,312,357 Liberty Oilfield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Ine 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Loews Corp 47,746 2,505,710 Msc Industrial Direct Co </td <td>Lennox International Inc</td> <td>4,829</td> <td>1,178,469</td> <td>Microsoft Corp</td> <td>1,060,212</td> <td>166,962,186</td>	Lennox International Inc	4,829	1,178,469	Microsoft Corp	1,060,212	166,962,186
Liberty Media Corp 22,782 1,047,061 Mohawk Industries Inc 7,740 1,055,349 LM Corp-Lbty Siriusxm 26,023 1,253,850 Molson Coors Beverage Co 24,348 1,312,357 Liberty Oilfield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Loekheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Lowe'S Cos Inc 98,448 11,785,210 Mylan	Liberty Broadband Corp	11,358	1,428,723	Mid-America Apart Comm	14,099	1,858,671
LM Corp-Lbty Siriusxm 26,023 1,253,850 Molson Coors Beverage Co 24,348 1,312,357 Liberty Oilfield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv	Liberty Global Plc	78,865	1,736,363	Middleby Corp	7,211	789,749
Liberty Oilfield Services 15,300 169,983 Mondelez International Inc 183,978 10,131,668 Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc	Liberty Media Corp	22,782	1,047,061	Mohawk Industries Inc	7,740	1,055,349
Liberty Property Trust 21,295 1,278,978 Mongodb Inc 3,933 517,740 Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Linde Ple 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 <td>LM Corp-Lbty Siriusxm</td> <td>26,023</td> <td>1,253,850</td> <td>Molson Coors Beverage Co</td> <td>24,348</td> <td>1,312,357</td>	LM Corp-Lbty Siriusxm	26,023	1,253,850	Molson Coors Beverage Co	24,348	1,312,357
Life Storage Inc 2,400 259,800 Monster Beverage Corp 63,620 4,042,415 Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Netail Properties Inc 34	Liberty Oilfield Services	15,300	169,983	Mondelez International Inc	183,978	10,131,668
Lincoln Electric Holdings 11,600 1,121,604 Moody'S Corp 23,393 5,551,627 Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc <	Liberty Property Trust	21,295	1,278,978	Mongodb Inc	3,933	517,740
Lincoln National Corp 41,608 2,455,288 Morgan Stanley 195,620 9,996,182 Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group	Life Storage Inc	2,400	259,800	Monster Beverage Corp	63,620	4,042,415
Linde Plc 59,722 12,704,064 Mosaic Co 48,186 1,042,263 Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179<	Lincoln Electric Holdings	11,600	1,121,604	Moody'S Corp	23,393	5,551,627
Live Nation Entertainment 17,120 1,223,566 Motorola Solutions Inc 20,514 3,303,985 Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	•	41,608	2,455,288	•		9,996,182
Lkq Corp 44,956 1,604,480 Msa Safety Inc 2,000 252,740 Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	Linde Plc	59,722	12,704,064		48,186	1,042,263
Lockheed Martin Corp 32,690 12,723,929 Msc Industrial Direct Co 10,494 823,464 Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	Live Nation Entertainment					
Loews Corp 47,746 2,505,710 Msci Inc 10,955 2,828,252 Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	Lkq Corp		1,604,480	•		
Lowe'S Cos Inc 98,448 11,785,210 Mylan Nv 92,494 1,857,280 Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	•					
Lululemon Athletica Inc 13,340 3,089,144 Nasdaq Inc 15,530 1,663,263 Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	•					
Lyondellbasell Industries 51,892 4,900,680 National Oilwell Varco Inc 48,659 1,218,908 M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893				•		
M&T Bank Corp 25,465 4,321,665 National Retail Properties Inc 34,669 1,858,605 Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893				_		
Manpowergroup Inc 7,271 705,941 National Western Life Group 600 173,226 Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	-					
Marathon Oil Corp 89,048 1,208,381 Netapp Inc 27,179 1,691,893	-			_		
				•		
Marathon Petroleum Corp 83,823 5,048,659 Netflix Inc 47,711 15,432,123	_					
	Marathon Petroleum Corp	83,823	5,048,659	Netflix Inc	47,711	15,432,123

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Neurocrine Biosciences Inc	8,995	966,423	Pfizer Inc	985,722	38,600,874
Newell Brands Inc	53,761	1,033,286	Philip Morris International	253,274	21,533,355
Newmark Group Inc	25,400	341,630	Phillips 66	74,978	8,347,301
Newmont Corp	89,891	3,904,865	Pinnacle West Capital Co	14,899	1,339,420
News Corp	50,449	712,844	Pinterest Inc	9,456	176,165
Nextera Energy Inc	61,100	14,784,367	Pioneer Natural Resources	18,449	2,791,887
Nielsen Holdings Plc	45,602	925,265	PNC Fin Services Group	76,030	12,132,867
Nike Inc	182,408	18,474,282	Polaris Inc	8,986	913,966
Nisource Inc	50,096	1,394,172	Popular Inc	6,000	352,500
Noble Corp Plc	83,200	100,672	Ppg Industries Inc	29,909	3,991,356
Noble Energy Inc	53,960	1,339,827	Ppl Corp	115,465	4,140,575
Nordstrom Inc	13,799	564,793	Principal Financial Group	59,280	3,258,622
Norfolk Southern Corp	41,476	8,048,833	Procter & Gamble Co	416,079	51,934,981
Northern Trust Corp	26,310	2,794,122	Progress Software Corp	5,900	245,145
Northrop Grumman Corp	20,496	7,046,525	Progressive Corp/The	75,154	5,438,895
Nortonlifelock Inc	67,559	1,724,106	Prologis Inc	79,937	7,123,985
Norwegian Cruise Line H	27,230	1,589,687	Propetro Holding Corp	9,700	108,931
Nrg Energy Inc	30,923	1,228,880	Prosperity Bancshares Inc	14,554	1,046,142
Nucor Corp	40,565	2,282,187	Prudential Financial Inc	64,505	6,045,409
Nvidia Corp	72,023	16,950,613	Ps Business Parks Inc	1,348	222,070
Nvr Inc	478	1,816,792	Ptc Inc	13,909	1,041,506
Nxp Semiconductors Nv	31,073	3,955,282	Public Service Ent Group	72,445	4,275,704
Occidental Petroleum Corp	110,783	4,563,152	Public Storage Inc	27,280	5,807,094
Oge Energy Corp	28,729	1,277,579	Pultegroup Inc	51,432	1,995,047
Okta Inc	11,015	1,270,140	Pvh Corp	9,328	980,746
Old Dominion Freight Line	11,013	2,089,166	Qorvo Inc	13,023	1,513,663
Omega Healthcare Investors	20,132	852,389	Qualcomm Inc	132,455	11,686,505
Omnicom Group Inc	64,863	5,253,903	Quest Diagnostics Inc	36,460	3,892,105
On Semiconductor Corp	48,902	1,192,231	Ralph Lauren Corp	6,737	789,711
Oneok Inc	44,723	3,383,742	Raymond James Financial	28,383	2,538,008
Oracle Corp	372,662	19,739,906	Raytheon Co	39,779	8,728,308
O'Reilly Automotive Inc	9,945	4,358,396	Reality Income Co	36,356	2,675,802
Owens Corning	13,609	886,218	Regency Centres Co	31,195	1,967,469
Paccar Inc	44,645	3,530,527	Regeneron Pharmaceuticals	9,922	3,725,513
Packaging Corp of America	22,911	2,564,657	Regions Financial Corp	123,551	2,117,664
Palo Alto Networks Inc	10,294	2,380,385	Reinsurance Group of Amric	8,834	1,440,560
Park Hotels & Resorts Inc	28,312	732,431	Renaissancere Holdings	5,871	1,150,892
Parker-Hannifin Corp	16,001	3,292,366	Renewable Energy Group	22,900	616,926
Paychex Inc	63,320	5,382,200	Republic Services Inc	30,494	2,732,262
Paycom Software Inc	5,398	1,429,444	Resmed Inc	18,553	2,875,158
Paypal Holdings Inc	148,887	16,103,618	Ringcentral Inc	8,018	1,352,396
Pentair Plc	21,747	997,100	Rlj Lodging Trust	13,500	239,220
People'S United Financial	50,886	858,956	Robert Half International	27,721	1,750,581
Pepsico Inc	208,755	28,518,021	Rockwell Automation	17,069	3,460,398
Perkinelmer Inc	9,933	964,395	Roku Inc	8,988	1,204,122
Perrigo Co Plc	12,733	657,532	Rollins Inc	17,060	565,539

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Roper Technologies	16,189	5,733,658	Tapestry Inc	48,132	1,297,639
Ross Stores Inc	59,348	6,905,733	Targa Resources Corp	29,283	1,195,039
Royal Caribbean Cruises	21,640	2,889,806	Target Corp	65,000	8,331,050
Rpm International Inc	8,342	640,165	TD Ameritrade Holding Co	38,161	1,898,128
S&P Global Inc	32,648	8,910,292	TE Connectivity Ltd	55,566	5,324,334
Sabre Corp	34,723	779,184	Technipfmc Plc	46,248	991,095
Salesforce.Com Inc	93,805	15,253,631	Teledyne Technologies	2,841	984,605
Sarepta Therapeutics Inc	7,983	1,029,807	Teleflex Inc	5,842	2,197,760
Sba Communications Com	12,479	3,008,687	Teradyne Inc	25,051	1,708,478
Schlumberger Ltd	151,286	6,078,671	Tesla Inc	14,173	5,925,448
Seagate Technology Plc	31,521	1,874,869	Teva Pharma Industries	62,165	609,217
Sealed Air Corp Seattle Genetics Inc	21,180 11,883	843,599 1,357,395	Texas Instruments Inc Textron Inc	157,885 30,506	20,248,751 1,360,263
Sei Investments Co		1,165,020	Thermo Fisher Scientific	, in the second	
Sempra Energy	17,792 34,978	5,295,669	Tiffany & Co	52,059 14,648	16,897,310 1,957,412
Sensata Tech Holding Plc	21,702	1,168,870	Tjx Cos Inc	203,190	12,402,718
Servicenow Inc	20,256	5,717,864	T-Mobile Us Inc	37,048	2,903,452
Sherwin-Williams Co	10,613	6,190,987	Toro Co	10,726	854,969
Signature Bank/New York	6,694	914,601	Tractor Supply Co	15,341	1,433,463
Simon Property Group Inc	47,832	7,121,228	Transdigm Group Inc	5,249	2,938,338
Sirius Xm Holdings Inc	170,399	1,216,649	Transocean Ltd	64,900	446,512
Skyworks Solutions Inc	22,403	2,707,627	Transunion	21,302	1,823,238
Sl Green Realty Corp	7,468	686,010	Travelers Cos Inc	36,914	5,053,896
Snap Inc	72,790	1,187,933	Trimble Inc	31,026	1,292,853
Snap-On Inc	21,360	3,617,530	Tripadvisor Inc	11,856	360,067
Southern Co/The	132,292	8,423,032	Truist Financial Corp	219,875	12,378,963
Southwest Airlines Co	24,100	1,300,918	Twdc Enterprises 18 Corp	270,476	39,097,306
Spirit Aero systems Holding	18,089	1,318,326	Twilio Inc	12,974	1,274,436
Splunk Inc	16,018	2,397,254	Twitter Inc	79,946	2,561,470
Sprint Corp	101,088	526,668	Tyler Technologies Inc	3,981	1,194,419
Square Inc	36,525	2,283,908	Tyson Foods Inc	36,855	3,353,805
Ss&C Tech Holdings Inc	24,392	1,497,669	Uber Technologies Inc	17,181	510,619
Stanley Black & Decker	20,803	3,446,849	Udr Inc	41,653	1,943,946
Starbucks Corp	154,052	13,539,630	Ugi Corp	25,335	1,143,875
State Street Corp	43,357	3,427,804	Ulta Beauty Inc	7,047	1,783,455
Steel Dynamics Inc	30,306	1,031,616	Under Armour Inc	36,787	734,491
Steris Plc	8,942	1,362,671	Union Pacific Corp	109,603	19,805,262
Stryker Corp	59,076	12,397,689	Unit Corp	8,300	5,918
Sun Communities Inc	9,956	1,494,396	United Airlines Holdings	11,327	997,795
Svb Financial Group	5,720	1,435,892	United Parcel Service	84,917	9,937,837
Swift Transportation Co	17,852	639,816	United Rentals Inc	12,399	2,067,285
Synchrony Financial	120,520	4,338,720	United Technologies Co	115,405	17,272,666
Synopsys Inc	18,744	2,607,665	United health Group	130,165	38,243,779
Sysco Corp	69,329	5,928,323	Universal Health Services	10,376	1,488,126
T Rowe Price Group Inc	51,073	6,220,691	Unum Group	56,868	1,658,271
Take-Two Interactive	15,162	1,854,919	Us Bancorp	256,927	15,233,202

Security	Unit holding	Fair Value	Security	Unit holding	Fair Value
Vail Resorts Inc	5,127	1,229,711	Western Union Co	132,662	3,552,688
Valero Energy Corp	64,057	5,997,016	Westinghouse AB Tech Co	20,065	1,560,856
Varian Medical Systems	26,653	3,784,726	Westlake Chemical Co	3,694	259,134
Veeva Systems Inc	15,769	2,217,752	Westrock Co	30,400	1,304,160
Ventas Inc	44,497	2,567,922	Weyerhaeuser Co	90,094	2,719,037
Vereit Inc	130,706	1,206,416	Whirlpool Corp	7,999	1,180,092
Verisign Inc	13,589	2,618,329	Whiting Petroleum Corp	15,100	110,683
Verisk Analytics Inc	20,445	3,051,621	Williams Cos Inc	131,866	3,125,224
Verizon Communications	638,154	39,150,748	Willis Towers Watson	16,759	3,381,631
Vertex Pharmaceuticals	27,815	6,086,756	Wix.Com Ltd	5,235	640,659
Vf Corp	48,365	4,821,023	Workday Inc	17,249	2,836,598
Vici Properties	38,357	979,638	Wp Carey Inc	20,750	1,660,000
Visa Inc	274,027	51,467,751	Wr Berkley Corp	20,305	1,402,466
Vistra Energy Corp	49,535	1,138,810	Ww Grainger Inc	5,875	1,987,924
Vmware Inc	9,392	1,425,048	Wynn Resorts Ltd	11,040	1,532,573
Vornado Realty Trst	21,800	1,449,264	Xcel Energy Inc	72,990	4,632,675
Voya Financial Inc	19,662	1,198,792	Xerox Holdings Corp	44,645	1,646,061
Vulcan Materials Co	14,382	2,070,433	Xilinx Inc	44,254	4,325,386
Wabco Holdings Inc	5,736	777,171	Xpo Logistics Inc	11,631	926,991
Walgreens Boots Alliance	109,585	6,458,940	Xylem Inc/Ny	21,444	1,689,144
Walmart Inc	184,870	21,960,707	Yum! Brands Inc	39,260	3,953,482
Waste Connections Inc	33,687	3,059,116	Zayo Group Holdings Inc	23,211	803,797
Waste Management Inc	69,486	7,915,845	Zebra Technologies Corp	5,671	1,448,600
Waters Corp	18,990	4,437,014	Zillow Group Inc	12,148	558,322
Wayfair Inc	6,154	556,137	Zimmer Biomet Holdings	22,402	3,352,011
Wec Energy Group Inc	46,135	4,254,108	Zions Bancorporation	24,224	1,257,468
Wellcare Health Plans	5,929	1,957,459	Zoetis Inc	59,661	7,893,150
Wells Fargo & Co	654,034	35,173,949			4,102,660,412
Welltower Inc	49,419	4,039,509			
West Pharma Services	6,750	1,014,120	Total equity securities		6,541,682,460
Western Digital Corp	35,190	2,232,806			

24. Schedule of financial assets valued through profit or loss (continued)

(c) Derivatives

D	** ** **	F . 17.1	D		F . W .
Derivatives S&P500 Emini Fut Eq	Unit Holding 230	Fair Value	Derivatives Buy USD:Sell SGD 10/01/2020	Unit Holding	Fair Value 5,543,261
US 10Yr Note (Cbt) B	- 181	830,966 234,734	Buy USD.Sell SGD 10/01/2020	5,543,261	3,343,261 370,794,647
03 1011 Note (Cot) B	- 101	1,065,700			370,794,047
		1,003,700	Sell AUD:Buy EUR 31/01/2020	(17,790,642)	(12,515,222)
Buy AUD:Sell EUR 03/01/2020	17,248,148	12,124,586	Sell AUD:Buy USD 10/01/2020	(5,754,000)	(4,045,625)
Buy AUD:Sell EUR 31/01/2020	19,715,799	13,869,516	Sell CAD:Buy EUR 02/01/2020	(8,036,181)	(6,197,166)
Buy AUD:Sell USD 10/01/2020	6,274,000	4,411,236	Sell CAD:Buy EUR 31/01/2020	(47,852,995)	(36,908,032)
Buy CAD:Sell EUR 31/01/2020	8,036,181	6,198,141	Sell CAD:Buy USD 10/01/2020	(6,722,000)	(5,184,029)
Buy CAD:Sell USD 05/02/2020	760,000	586,180	Sell CHF:Buy EUR 31/01/2020	(5,158,230)	(5,337,949)
Buy CAD:Sell USD 10/01/2020	16,008,000	12,345,424	Sell CHF:Buy USD 10/01/2020	(2,357,000)	(2,435,347)
Buy CHF:Sell EUR 31/01/2020	670,827	694,200	Sell DKK:Buy EUR 31/01/2020	(3,092,278)	(465,464)
Buy CHF:Sell USD 03/01/2020	555,479	573,634	Sell DKK:Buy USD 10/01/2020	(35,234,000)	(5,295,671)
Buy CHF:Sell USD 10/01/2020	5,805,000	5,997,959	Sell EUR:Buy AUD 03/01/2020	(10,776,321)	(12,096,422)
Buy DKK:Sell EUR 31/01/2020	5,789,184	871,414	Sell EUR:Buy AUD 31/01/2020	(12,283,030)	(13,813,579)
Buy DKK:Sell USD 10/01/2020	11,460,000	1,722,438	Sell EUR:Buy CAD 31/01/2020	(5,483,778)	(6,167,094)
Buy EUR:Sell AUD 31/01/2020	11,103,172	12,486,702	Sell EUR:Buy CHF 31/01/2020	(617,274)	(694,191)
Buy EUR:Sell CAD 02/01/2020	5,491,869	6,164,624	Sell EUR:Buy DKK 31/01/2020	(774,902)	(871,460)
Buy EUR:Sell CAD 31/01/2020	32,741,118	36,820,885	Sell EUR:Buy GBP 31/01/2020	(894,196)	(1,005,619)
Buy EUR:Sell CHF 31/01/2020	4,735,984	5,326,119	Sell EUR:Buy HKD 31/01/2020	(3,428,527)	(3,855,745)
Buy EUR:Sell DKK 31/01/2020	413,927	465,505	Sell EUR:Buy JPY 31/01/2020	(15,984,693)	(17,976,495)
Buy EUR:Sell GBP 31/01/2020	3,878,026	4,361,254	Sell EUR:Buy NOK 31/01/2020	(6,621,213)	(7,446,261)
Buy EUR: Sell HKD 02/01/2020	3,435,642	3,856,509	Sell EUR:Buy NZD 31/01/2020	(3,844,746)	(4,323,828)
Buy EUR:Sell JPY 07/01/2020	5,011,054	5,626,664	Sell EUR:Buy SGD 31/01/2020	(1,914,565)	(2,153,133)
Buy EUR:Sell SEK 31/01/2020	10,664,993	11,993,925	Sell EUR:Buy USD 02/01/2020	(2,660,679)	(2,986,613)
Buy EUR:Sell USD 10/01/2020	21,599,000	24,257,057	Sell EUR:Buy USD 03/01/2020	(2,413)	(2,708)
Buy GBP:Sell EUR 31/01/2020	758,391	1,005,551	Sell EUR:Buy USD 10/01/2020	(14,021,000)	(15,746,479)
Buy GBP:Sell USD 10/01/2020	12,787,000	16,943,666	Sell GBP:Buy EUR 31/01/2020	(3,325,682)	(4,409,524)
Buy GBP:Sell USD 15/01/2020	5,211,900	6,907,161	Sell GBP:Buy USD 10/01/2020	(10,438,000)	(13,831,077)
Buy HKD: Sell EUR 31/01/2020	30,000,000	3,848,952	Sell GBP:Buy USD 15/01/2020	(11,019,500)	(14,603,785)
Buy HKD:Sell USD 10/01/2020 Buy JPY:Sell EUR 31/01/2020	18,558,000 1,942,476,235	2,381,419 17,903,924	Sell HKD:Buy EUR 02/01/2020 Sell JPY:Buy EUR 07/01/2020	(30,000,000) (610,897,622)	(3,850,201) (5,622,984)
Buy JPY:Sell USD 07/01/2020	146,994,793	1,352,609	Sell JPY:Buy USD 06/01/2020	(7,145,453)	(65,766)
Buy JPY:Sell USD 10/01/2020	1,016,800,000	9,360,734	Sell JPY:Buy USD 07/01/2020	(12,332,471)	(113,514)
Buy NOK:Sell EUR 31/01/2020	65,910,324	7,501,650	Sell JPY:Buy USD 10/01/2020	(811,684,000)	(7,472,422)
Buy NOK:Sell USD 10/01/2020	30,150,000	3,431,235	Sell NOK:Buy USD 10/01/2020	(14,930,000)	(1,699,116)
Buy NZD:Sell EUR 31/01/2020	6,437,934	4,345,219	Sell NZD:Buy USD 10/01/2020	(29,087,000)	(19,625,868)
Buy NZD:Sell USD 10/01/2020	6,746,000	4,551,728	Sell SEK:Buy EUR 31/01/2020	(111,834,802)	(11,964,316)
Buy SEK:Sell USD 02/01/2020	703,444	75,146	Sell SEK:Buy USD 10/01/2020	(82,170,000)	(8,781,605)
Buy SEK:Sell USD 03/01/2020	797,684	85,218	Sell SGD:Buy USD 10/01/2020	(7,571,000)	(5,630,636)
Buy SEK:Sell USD 10/01/2020	71,998,000	7,694,511	Sell USD:Buy AUD 10/01/2020	(4,281,639)	(4,281,639)
Buy SGD:Sell EUR 31/01/2020	2,887,939	2,148,200	Sell USD:Buy CAD 05/02/2020	(586,185)	(586,185)
Buy SGD:Sell USD 10/01/2020	6,626,000	4,927,829	Sell USD:Buy CAD 10/01/2020	(12,095,841)	(12,095,841)
Buy USD:Sell AUD 10/01/2020	3,903,426	3,903,426	Sell USD:Buy CHF 03/01/2020	(573,451)	(573,451)
Buy USD:Sell CAD 10/01/2020	5,057,876	5,057,876	Sell USD:Buy CHF 10/01/2020	(5,858,739)	(5,858,739)
Buy USD:Sell CHF 10/01/2020	2,385,487	2,385,487	Sell USD:Buy DKK 10/01/2020	(1,710,234)	(1,710,234)
Buy USD:Sell DKK 10/01/2020	5,217,396	5,217,396	Sell USD:Buy EUR 10/01/2020	(23,912,064)	(23,912,064)
Buy USD:Sell EUR 02/01/2020	2,980,710	2,980,711	Sell USD:Buy GBP 10/01/2020	(16,658,562)	(16,658,561)
Buy USD:Sell EUR 03/01/2020	2,711	2,711	Sell USD:Buy GBP 15/01/2020	(6,839,652)	(6,839,651)
Buy USD:Sell EUR 10/01/2020	15,546,254	15,546,254	Sell USD:Buy HKD 10/01/2020	(2,368,955)	(2,368,955)
Buy USD:Sell GBP 10/01/2020	13,724,601	13,724,600	Sell USD:Buy JPY 07/01/2020	(1,350,137)	(1,350,137)
Buy USD:Sell GBP 15/01/2020	14,421,473	14,421,473	Sell USD:Buy JPY 10/01/2020	(9,344,818)	(9,344,818)
Buy USD:Sell JPY 06/01/2020	65,268	65,268	Sell USD:Buy NOK 10/01/2020	(3,288,236)	(3,288,236)
Buy USD:Sell JPY 07/01/2020	112,986	112,986	Sell USD:Buy NZD 10/01/2020	(4,401,314)	(4,401,314)
Buy USD:Sell JPY 10/01/2020	7,474,585	7,474,585	Sell USD:Buy SEK 02/01/2020	(75,308)	(75,308)
Buy USD:Sell NOK 10/01/2020	1,629,370	1,629,370	Sell USD:Buy SEK 03/01/2020	(85,385)	(85,385)
Buy USD:Sell NZD 10/01/2020	18,804,031	18,804,030	Sell USD:Buy SEK 10/01/2020	(7,533,191)	(7,533,191)
Buy USD:Sell SEK 10/01/2020	8,706,489	8,706,489	Sell USD:Buy SGD 10/01/2020	(4,861,808)	(4,861,807)

24. Schedule of financial assets valued through profit or loss (continued)

Derivatives Unit Holding Fair Value

(371,020,460)

Total derivative 839,887

(d) Special private debt instruments

Security	Nominal	Amortised Cost
TL Debt Ins1 4.5% 10Apr37	143,000,000	147,688,970
TL Debt Ins2 4.5% 10Apr37	279,650,000	288,819,724
TL Debt Ins3 4.5% 10Apr37	226,600,000	234,030,214
TL Debt Ins4 4.5% 10Apr37	750,000	774,593
Total		671,313,500

Annex III. Statements on accounting policies of the Petroleum Fund for the fiscal year 2019



República Democrática de Timor-Leste Ministério das Finanças



Direção Geral do Tesouro

REF NO: 197/VIII/DGT-MF/2020

23 July 2020

Treasury Statement on Accounting Policies of the Petroleum Fund for the Fiscal Year 2019

This statement on the Accounting Policies of the Petroleum Fund is made in accordance with the provisions of Article 24.1 (d) of the Petroleum Fund Law, No. 12/2011. It may be retained for Petroleum Fund records.

In accordance with Article 21 of the Petroleum Fund Law, the Financial Statements of the Petroleum Fund for the Fiscal Year ended 31st December 2019 have been prepared in accordance with International Financial Reporting Standards (IFRS) which comprise standards and interpretations approved by the International Accounting Standards and Standing Interpretations Committee interpretations approved by the International Accounting Standards Committee (IASC) that remained in effect at the balance sheet date of the Petroleum Fund.

During the 2019 Fiscal Year, new and revised IFRS applied that had no material effect in the financial statements comprised:

- IFRS 16 Leases
- Prepayment Features with Negative Compensation Amendments to IFRS 9
- Long-term Interests in Associates and Joint Ventures Amendments to IAS 28
- Annual Improvements to IFRS Standards 2015 2017 Cycle
- Plan Amendment, Curtailment or Settlement Amendments to IAS 19
- Interpretation 23 Uncertainty over Income Tax Treatments.

The Petroleum Fund has not elected to adopt the following amendment early:

Definition of Material – Amendments to IAS 1 and IAS 8.

Further details of application of new IFRS on the accounting policies of the Petroleum Fund are detailed in Note 22 of the Notes to the Financial Statements.

Previously adopted accounting standards have continued to be applied.

Rui Ferreira Magno

Director General of Treasury

Annex IV. Comparison of income derived from the investment of the Petroleum Fund assets with the previous three fiscal years

Comparison of Income Derived from the Investment of the Petroleum Fund Assets with the Previous Three Fiscal Years

(As per Article 24.1 (e) of the Petroleum Fund Law No. 9/2005, of 3^{rd} of August as amended by the Law No. 12/2011, of 28^{th} of September)

Please refer to the Audited Financial Statements for details.

Financial Year	Financial Year	Financial Year	Financial Year
2019	2018	2017	2016
US\$ 2,100,923,843	US\$ (459,920,721)	US\$1,612,087,594	US\$647,681,894

Annex V. Comparison of nominal income on the investment of the Petroleum Fund assets with the real returns after adjusting for inflation

Comparison of Nominal Income on the Investment of the Petroleum Fund Assets with the Real returns After Adjusting for Inflation

(As per Article 24.1 (f) of the Petroleum Fund Law No. 9/2005, of 3^{rd} of August as amended by the Law No. 12/2011, of 28^{th} of September)

Petroleum Fund's nominal and real return:

Return	2019	2018
Nominal return	13.25%	-2.63%
Inflation ¹⁷	2.29%	1.91%
Real return	10.72%	-4.46%

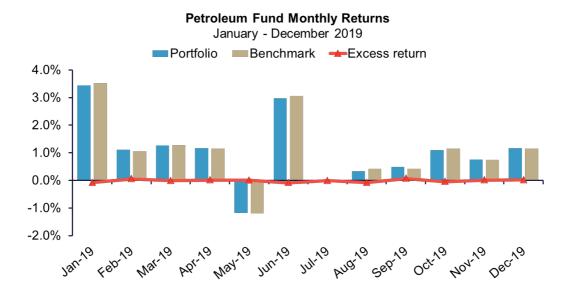
The Petroleum Fund's nominal return for 2019 was 13.25%. The real return of the Fund for the year was 10.72%, after adjusting for the US inflation of 2.29%.

¹⁷ US CPI was used in portfolio real return calculation. Source: US Department of Labor - Bureau of Labor Statistics (www.bls.gov).

Annex VI. Comparison of nominal income on the investment of the Petroleum Fund assets with the benchmark performance index

Comparison of Nominal Income on the Investment of the Petroleum Fund Assets with the Benchmark Performance Index

(As per Article 24.1 (g) of the Petroleum Fund Law No. 9/2005, of 3^{rd} of August as amended by the Law No. 12/2011, of 28^{th} of September)



Petroleum Fund Monthly Return

January - December 2019

Period	Portfolio	Benchmark	Excess return
January 2019	3.44%	3.52%	-0.08%
February 2019	1.10%	1.05%	0.05%
March 2019	1.27%	1.28%	-0.01%
April 2019	1.17%	1.16%	0.01%
May 2019	-1.18%	-1.19%	0.00%
June 2019	2.97%	3.06%	-0.09%
July 2019	0.00%	0.01%	-0.01%
August 2019	0.33%	0.41%	-0.08%
September 2019	0.48%	0.42%	0.07%
October 2019	1.10%	1.15%	-0.05%
November 2019	0.75%	0.74%	0.01%
December 2019	1.17%	1.15%	0.02%
Fiscal Year 2019	13.25%	13.44%	-0.18%

Annex VII. Comparison of the Estimated Sustainable Income for the fiscal year 2019 with the sum of transfers from the Petroleum Fund for the same year

Comparison of the Estimated Sustainable Income for the Fiscal Year 2019 with the Sum of Transfers from the Petroleum Fund for the Same Year

(As per Article 24.1 (h) of the Petroleum Fund Law No. 9/2005, of 3^{rd} of August as amended by the Law No. 12/2011, of 28^{th} of September)

The total withdrawals from the Petroleum Fund for the Financial Year 2019 was US\$969 million which was US\$440 million more than the Estimated Sustainable Income (ESI) amount of US\$529 million projected for the year.

Please refer to Statement of Changes in Capital and Notes to the Financial Statements for further details.

Annex VIII. Treasury statement on borrowings



República Democrática de Timor-Leste Ministério das Finanças



Direção Geral do Tesouro

REF NO: /S//DGT/7/2020

23 July 2020

Treasury Statement on Borrowings by Government of Timor-Leste for Fiscal Year 2019

This statement is made in accordance with the requirement under Article 24.1 (i) of the Petroleum Fund Law No. 12/2011 to declare if there have been any borrowings by the Government of Timor-Leste in which the Petroleum Fund is being used as collateral as detailed in Article 20.2.

While sovereign loans negotiated and entered into from time to time by Timor-Leste with international financial institutions such as World Bank, Asian Development Bank, and Japan International Co-operation Agency, engage all of Timor-Leste's assets for payment of interest and re-payment of principal, such sovereign loans do not have any specific collateral requirements that encumber the Petroleum Fund, under their terms and conditions.

One new loan was signed with the World Bank during the fiscal year ended 31st December, 2019 for US\$59 million. Total value of all loans negotiated up to 31st December 2019 at exchange rates ruling on that date amounted to approximately US\$452 million. This also includes Special Drawing Rights (SDRs) and Yen denominated liabilities which can vary according to ruling exchange rates.

Rui Ferreira Magno

Director General of Treasury

Annex IX. List of persons holding positions relevant for the operations and performance of the Petroleum Fund

List of Persons Holding Relevant positions for the Operations and Performance of the Petroleum Fund

(As per Article 24.1 (j) of the Petroleum Fund Law No. 9/2005, of 3^{rd} of August as amended by the Law No. 12/2011, of 28^{th} of September)

The list of persons holding relevant positions for the operation and performance of the Petroleum Fund is given below:

(i) Minister of Finance

Mr. Fernando Hanjam

Vice- Minister

Ms. Sara Lobo Brites (Acting Minister, 25 Jun 2018-28 May 2020)

(ii) The Director General of Treasury

Mr. Rui Ferreira Magno

(iii) The members of the Investment Advisory Board (IAB)

Name	Position
Mr. Olgário de Castro	Chairman of the IAB
Mr. Torres Trovik	Member of the IAB
Mr. Gualdino da Silva	Member of the IAB
Prof. Michael Drew	Member of the IAB
Mr. Abraão Fernandes de Vasconselos (Alternate Mr. Venancio Alves Maria)	Governor of the Central Bank of Timor-Leste
Mr. Rui Ferreira Magno (Alternate Mr. Ernesto da Conceição Silva)	Director General of Treasury

Note: See page 97 for the details.

(iv) Operational Manager

• Banco Central de Timor-Leste (BCTL) – from 12 October 2005.

- (v) The External Investment Managers
 - Bank for International Settlements (BIS) from 3 June 2009.
 - Schroders Investment Management Limited from 8 October 2010.
 - State Street Global Advisors (SSGA) from 14 September 2011 (implementation commenced in January 2012).
 - BlackRock Investment Management Australia Limited from April 2012 (implementation commenced in February 2013).
 - AllianceBernstein from July 2014.
 - Wellington Management from December 2014.
- (vi) Custodian
 - JP Morgan Chase Bank N.A.
- (vii) Independent Auditor
 - Deloitte Touche Tohmatsu
- (viii) The Governor of the Central Bank

Mr. Abraão Fernandes de Vasconselos

(ix) The Petroleum Fund Consultative Council (PFCC) was formally constituted on 6 November 2006. For the Financial Year 2019 members of the PFCC were:

Name	Representation	Position
Pe. Julio Crispim X. Belo	Religious	Coordinator (from Aug 31, 2017)
Sra. Izilda Imanuela da Luz Pereira Soares Sr. Nuno Eugénio Goulart	National Parliament National Parliament	Vice Coordinator (from Dec 4, 2017) Vice Coordinator (from Oct 16, 2019)
Sra. Zelia Fernandes	Civil Society	Secretary
Sra. Izilda Imanuela da Luz Pereira Soares	National Parliament	Secretary
Sr. Julio Fernandes	Private Sector	Member
Sr. Hernani Agostinho Soares	Private Sector	Member (from Oct 16, 2019)
Sr. Juvinal Dias	Civil Society	Member (from Dec 4, 2017)
Sra. Martinha da Silva de Jesus	Civil Society	Member (from Oct 16, 2019)

Members of the Investment Advisory Board



Olgario de Castro is Chairman of the Investment Advisory Board. He has been with the Petroleum Fund for more than 10 years. He is a Timorese national and chartered accountant and partner in De Castro Sullivan Lai Practice in Darwin, Australia. His areas of expertise include tax, financial and management accounting and auditing.

Dr. Torres Trovik is a long-serving member of the IAB. He is one of the architects in setting up the Petroleum Fund in 2005. He is a Norwegian national and an investment professional with international experience in financial markets, sovereign wealth funds and pension funds. He is currently a Senior Advisor and Developer at KLP, Oslo and a member of the Advisory Committee for the International Forum of Sovereign Wealth Funds (IFSWF).

Gualdino da Silva has been with the Petroleum Fund June 2012. He holds geological engineering qualification from RMIT and currently serves as the President of the National Authority for Petroleum and Minerals.

Prof. Dr. Michael Drew joined the Petroleum Fund in April 2017. He is a Professor of Finance at Griffith University and a consulting financial economist specializing in the areas of investment, governance, and pension plan design. He also serves as a Trustee Director of QSuper and is a member of the Investment Committee.

Venancio M. Alves is Executive Manager of the Petroleum Fund at the Central Bank and is the Deputy Governor of the Central Bank. He is a Timorese national with more than 15 years' experience in managing the Petroleum Fund's investments. He is a non-voting member and the appointed alternate to the Governor of the Central Bank.

Ernesto D.C. Silva joined the Petroleum Fund in 2017. He is a public servant and Director for Accounting and Financial Regulation at the Ministry of Finance. He is a non-voting member and the appointed alternate to the Director General of Treasury.

Annex X. Statement on total withdrawals versus the approved appropriation amount

Statement affirming that Total Withdrawals from the Fund did not exceed the Approved Appropriation Amount for the Fiscal Year

(As per Article 7.2 of the Petroleum Fund Law No. 9/2005, of 3^{rd} of August as amended by the Law No. 12/2011, of 28^{th} of September)

In accordance with Article 7 of Law No.9/2005, of the 3rd August as amended by the Law No.12/2011, of the 28th September, Petroleum Fund Law, the total transfer amount for the Petroleum Fund for a Fiscal year shall not exceed the appropriation amount approved by the Parliament for the Fiscal year.

In accordance with Article 5 of Law No. 2/2019, of the 7th February on the General State Budget for 2019, the transfer amount from the Petroleum Fund to the General State Budget for 2019 is not to exceed US\$1,196.4 million.

The total actual transfer amount from the Petroleum Fund to the Consolidated Fund of Timor-Leste for 2019 was US\$969 million.

The total transfer amount from the Petroleum Fund for 2019 was in compliance with Article 7.2 of the Petroleum Fund Law No.9/2005 as amended by Law No.12/2011.

Annex XI. Article 35 report on the Petroleum Fund receipts from Deloitte Touche Tohmatsu



Deloitte Touche Tohmatsu ABN 74 490 121 060

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Compilation Report to the Ministry of Finance, Democratic Republic of Timor-Leste in respect of the Statement of Petroleum Fund Receipts for the year ended 31 December 2019

We have compiled the accompanying schedule of payment amounts made to the Petroleum Fund for each Payer (Petroleum Fund Receipts) for the year ended 31 December 2019, based on the information provided by the Petroleum Fund operational managers ("management").

We performed this compilation engagement in accordance with International Standard on Related Services 4410 (Revised), Compilation Engagements.

Our procedures use accounting expertise to collect, classify and summarise the financial information, which management provided, in compiling the statement of Petroleum Fund Receipts. Our procedures do not include verification or validation procedures. We have complied with relevant ethical requirements, including principles of integrity, objectivity, professional competence and due care.

The National Petroleum Authority and the National Directorate of Petroleum Tax Revenue are responsible for monitoring that all payments that should have been made under the Petroleum Fund Law (Law No. 9/2005, amendment No. 12/2011) have been made for the year and it is management that are responsible for the information contained in the attached list.

Since a compilation engagement is not an assurance engagement, we are not required to verify the accuracy or completeness of the information provided to us by management to compile the accompanying list of aggregate amounts of payments made as Petroleum Fund Receipts for each Payer. Accordingly, we have not audited or reviewed the attached list and accordingly express no assurance thereon.

The Statement of Petroleum Fund Receipts was compiled exclusively for the benefit of the Ministry of Finance as required by the Petroleum Fund Act. We do not accept responsibility to any other person for the contents of the Statement of Petroleum Fund Receipts.

Descrite Touche Tohmatsu

Deloitte Touche Tohmatsu

Cheryl Cra

Chartered Accountants

Darwin, 23 July 2020

Liability limited by a scheme approved under Professional Standards Legislation.

Member of Delotte Asia Pacific Limited and the Deloitte Network.

PETROLEUM FUND OF TIMOR-LESTE STATEMENT OF PETROLEUM FUND RECEIPTS FOR THE YEAR ENDED 31 DECEMBER 2019

Babcock Offshore Services Brunel Energy Pty Ltd Calidus Process Solutions Pty Ltd Caltech Unipessoal Lda Cape Australia Onshore Clough Amec Pty Ltd Connoco Philips ENI Furmanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd Wood Group Australia	975,251 100,753 2,087 632,363 29,645 1,477,742 186,932,298 39,747,745 1,097 771,684 17,186 41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023 509,074
Calidus Process Solutions Pty Ltd Caltech Unipessoal Lda Cape Australia Onshore Clough Amee Pty Ltd Connoco Philips ENI Furnanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	2,087 632,363 29,645 1,477,742 186,932,298 39,747,745 1,097 771,684 17,186 41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
Caltech Unipessoal Lda Cape Australia Onshore Clough Amee Pty Ltd Connoco Philips ENI Furmanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SoSa Australia Pty Ltd Solar Tubimes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	632,36: 29,64: 1,477,742 186,932,298 39,747,74: 1,097 771,684 17,186 41,926 86,15: 325,815 115,43: 64,23: 426 293,406 310,500 26,605,02:
Cape Australia Onshore Clough Amec Pty Ltd Connoco Philips ENI Furmanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	29,645 1,477,742 186,932,298 39,747,745 1,097 771,684 17,186 41,926 86,153 325,815 115,433 64,235 426 293,406 310,500 26,605,023
Clough Amec Pty Ltd Connoco Philips ENI Furmanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	1,477,742 186,932,298 39,747,745 1,097 771,684 17,186 41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
Connoco Philips ENI Furmanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	186,932,298 39,747,745 1,097 771,684 17,186 41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
ENI Furmanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	39,747,745 1,097 771,684 17,186 41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
Furmanite Australia Pty Ltd Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	1,097 771,684 17,186 41,926 86,153 325,819 115,435 64,235 4266 293,406 310,500 26,605,023
Haliburton Australia Pty Ltd Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	771,684 17,186 41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
Japan Energy Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	17,186 41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
Konnekto Unipessoal Lda Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubimes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	41,926 86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
Neptune Marine Service Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubimes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	86,153 325,819 115,435 64,235 426 293,406 310,500 26,605,023
Rigforce Pty Ltd SGS Australia Pty Ltd Solar Tubimes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	325,819 115,435 64,235 426 293,406 310,500 26,605,023
SGS Australia Pty Ltd Solar Tubirnes International Speirs Safeguard Ltd Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	115,435 64,235 426 293,406 310,500 26,605,023
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Timor GAP Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	293,406 310,500 26,605,023
Timor Resources Pty Ltd Tokyo Timor Sea Weatherford Australia Pty Ltd	310,500 26,605,023
Tokyo Timor Sea Weatherford Australia Pty Ltd	26,605,023
Weatherford Australia Pty Ltd	
	509 074
Wood Group Australia	202,014
	8,180
Amec Engineering Pty Ltd	50,129
Atlas Marine Unip Lda	137,449
Carnaryon Petroleum	9,217
Go Offshore Pty Ltd	126,106
INPEX	26,350,398
Kotug Maritime Services Pty Ltd	55,398
MAERSK	929,193
Paladin Resources Ltd	530
Repsol Oil & Gas Pty Ltd	225
SANTOS	35,717,066
Schlumberger Australia Pty Ltd	2,773,006
Subsea 7 Australia Contracting Pty	242,320
Cameron Services Pty Ltd	143,629
Caterpilar of Australia Pty Ltd	10,292
Compass Group Australia Pty Ltd	313,797
Competentia Pty Ltd	54,781
Corporate Protection Australia Pty Ltd	16,658
Dekra Organisational Reliability Ltd	2,831
DRW Safety Solutions Limited	143
Fireroft Austarlia Pty Ltd	24,170
GAP MHS Avaiation Lda	2,485
Hertel Modern Pty Ltd	158,870
Kameron Services Pty Ltd	5,592
KT Maritime Services	443,364
MMA Offshore Vessel Operations Pty Ltd	210,988
Nobel International Finance Company	51,307
Sodexo Timor Unip Lda	46,480
Talisman Resources Pty Ltd	45
Ventnor Avenue Pty Ltd	437,768
Woodside Energy	25,508
Total Article 6.1(a) receipts per the Petroleum Fund and National Directorate of Petroleum	3228

PETROLEUM FUND OF TIMOR-LESTE STATEMENT OF PETROLEUM FUND RECEIPTS continued FOR THE YEAR ENDED 31 DECEMBER 2019

Article 6.1(b) receipts:

Article 6.1(b) receipts	428,866,696
Article 6.1(a) receipts	327,387,772
Summary of Receipts for the year ended 31 December 2019 per the Petroleum Fund:	
Fotal Article 6.1(b) receipts per the Petroleum Fund for the year	428,866,696
Amount paid to Petroleum Fund in January 2019	25,828,320
Add:	
Amount paid to Petroleum Fund in January 2020	(29,547,294)
Less:	
Article 6.1(b) receipts per Autoridade Nacional do Petróleo e Minerais (ANPM)	432,585,670
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Annex XII. Advice provided by the Investment Advisory Board

Investment Advisory Board

Date: 15 February 2019

Τo

H.E. Sara Lobo Brites

Interim Minister and Vice Minister of Finance Democratic Republic of Timor-Leste

Subject: Petroleum Fund Investment in Petroleum Operations

Dear Interim Minister and Vice Minister,

Thank you for your letter dated Friday 8 February 2019 concerning the proposal for the Petroleum Fund to invest in petroleum operations. The IAB understands the time constraints and welcomes the opportunity to advise in accordance with the Petroleum Fund Law.

In that letter you requested the IAB to provide guidance on how to fund the investment and adjust the Petroleum Fund's asset allocation.

A. Background

The Government of Timor-Leste has contracted to invest in the Greater Sunrise joint venture. It subsequently proposed using the Petroleum Fund to finance the transactions, amending the Petroleum Activities Law to cross-reference Article 15.4 of the Petroleum Fund Law. Given the commercially sensitive nature of the investment and time constraints, the IAB was not consulted on the amendments to the Petroleum Activities Law and has not been provided with the supporting analysis on the acquisition of the Sunrise interest.

The Minister of Finance's rules and criteria for the investment have been drafted and were attached to your letter. Our understanding is that the BCTL will act as the portfolio manager for the Petroleum Fund's investment in petroleum operations and that the terms are to be agreed between the BCTL and Timor Gap E.P. The key terms were discussed by the Ministry of Finance, the BCTL, Timor Gap E.P. and the Prime Minister's Office. The Petroleum Fund's investment is to be structured as private debt issued by Timor Gap E.P. or its 100% owned subsidiaries, and that the proceeds will finance acquiring the interest in the Joint Venture. The interest rate will be 4.5% and the debt will be repaid in 18 years, with a grace period on repayments of 8 years. The terms of the investment reflect the national development objectives.

Legal advice from the Prime Minister's Office, which you have shared, indicates that the investment can be structured so as to conform to the applicable law. This involves interpreting Article 22(6) of the Petroleum Activities Law in conjunction with the Petroleum Fund Law.

B. IAB advice on the investment policy

The investment decision has been made by the Government and the IAB has been asked to assist with its implementation as an investment held by the Petroleum Fund. The IAB notes that alternative funding for the investment through the budget proved not to be possible. The Board trusts that the Government's representatives and Timor Gap E.P. have undertaken the due diligence to assess the acquisition's merits and its risks.

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The Board notes that the legal advice from the Prime Minister's office supports the transaction. The IAB points to one issue that is not addressed in the legal advice. The agreed interest rate of 4.5% over 18 years is comparable to international market terms of relatively less risky investments, such as lower investment grade corporate credit. The legal question concerns whether the investment terms can reflect the development objectives or whether it needs to be a "commercial transaction" according to the Petroleum Activity Law or to "maximise the risk-adjusted financial returns" according to the Petroleum Fund Law.

The Board's normal practice would be to obtain independent legal advice on whether the amendments to the Petroleum Activities Law imply that the transaction is eligible in relation to the Petroleum Fund Law. Given the urgency, we understand that Your Excellency may be satisfied by the Government's legal advice and decide on that basis to proceed with an interim governance regime for the Fund.

Our understanding of the investment's risk profile supports funding the acquisition from the Petroleum Fund's investment in equities. The proposed allocations are provided in the table below, which shows the introduction of a 5% allocation to "Other Eligible Investments" and reduces equities to 35% of the Fund's value. We understand that the investment will be valued as a buy and hold investment amortised over its life. For benchmarking returns, the 4.5% agreed interest rate can be applied. The current management agreement between the Ministry of Finance and the BCTL will need to be reviewed to reflect the new investment.

Recommended changes to the Petroleum Fund's asset allocation

	Current*	Proposed
Cash	5%	5%
3-5 Year US Treasury Bond Index	35%	35%
5-10 Year US Treasury Bond Index	10%	10%
Global Treasury Developed Market ex US	10%	10%
Total Equity	40%	35%
Other eligible investments		5%

^{*} This includes the 5% Cash allocation as advised in May 2018.

C. Issues for the Petroleum Fund going forward

While the initial exposure represents 4% of the Fund's current balance, the 5% upper limit on the asset class in Article 15.4 of the Petroleum Fund Law is expected to be breached in the coming years. According to the 2019 Budget Book, the Fund's balance is projected to decline from withdrawals and declining petroleum inflows, while the investment's value will increase as interest is accrued during the grace period. The private debt is illiquid and practically cannot be sold. This will require the 5% limit in Article 15.4 of the Petroleum Fund Law to be amended in the near future.

The IAB recommends broader changes to the Petroleum Fund Law to reflect the national development objectives associated with this project, which are set out in the draft rules and criteria. The IAB is obligated to take into account the objective of the Petroleum Fund when giving advice, according to Article 16.3 of the Petroleum Fund Law. Economic development of the national economy has not so far been part of the objective of the Petroleum Fund. Rather, the Petroleum Fund Law preamble relates the Fund's objective to sound fiscal management, with an emphasis on the separation between domestic investments through fiscal budgets and financial investments in the Fund. A debt instrument issued by another public entity in Timor-Leste to the Petroleum Fund will not qualify within such an objective.

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The IAB thus registers that the objective of the Fund now has changed to include domestic economic development. The IAB advises to align the Petroleum Fund Law accordingly. The IAB would recommend that the Minister forms a plan and a timeline for the Petroleum Fund institutions to understand and evaluate best practice for domestic development funds, with a view to adapting the current regime to its new objective as soon as possible.

History shows that successful risk taking in sovereign wealth funds is heavily dependent on good governance. The IAB thus strongly advises the Minister to allow due process and broad involvement of stakeholders in exploring this needed change in the Petroleum Fund Law. The IAB is available to provide input during this process, as was the case prior to the amendments to the Petroleum Fund Law in 2011.

Lastly, the IAB will undertake a review of the Fund's strategic asset allocation in the following months to account for the presence of the domestic development objective and its potential impact on the Fund's overall risk. To be in a position to provide advice on the appropriate investment policy, we would appreciate the Ministry of Finance's assistance in projecting the expected cash flow profile of the Fund over the coming years.

D. Conclusion

The Board understands the strategic importance of the acquisition to Timor-Leste and its national development objectives. While the IAB sees the necessity of implementing decisions within the current legal framework, we request the Minister to provide a timeline for addressing the issues raised above as soon as possible. It would be critical for the IAB to understand the Minister's plan before the IAB meets for its asset allocation review in April. Revising the governance framework around the new objective is important for the success of the Petroleum Fund.

Yours Sincerely

Olgario de Castro

Investment Advisory Board

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Chairman

Investment Advisory Board

Date: 30 May 2019

To

H.E. Sara Lobo Brites

Interim and Vice Minister of Finance Democratic Republic of Timor-Leste

Subject: Currency hedging and the bond portfolio

Dear Minister,

Thank you for your letter dated 22 February 2019.

The IAB has reviewed the BCTL's report "Sovereign Fixed Income Hedging and Investment Strategy Review", January 2019.

The BCTL's report follows research undertaken by the IAB that supported hedging the currency exposure of the non-US bond portfolio. The Board postponed providing its advice upon becoming aware of operational issues with executing currency derivatives. The BCTL has investigated alternatives for implementing hedging and its January 2019 report confirms that hedging of the bond portfolio can be implemented effectively and at a reasonable cost. The rationale for hedging is set out below along with the Board's recommendation to amend the bond portfolio's managers.

Recommendation to hedge non-US bonds

The currency numeraire in economic terms is the unit of measure that represents the purchasing power of the Fund. It is common for sovereign wealth funds to adopt a reporting currency that differs from the true currency basket numeraire in order to facilitate more transparency on the measurement of returns.

The US dollar has been the reporting unit since the Petroleum Fund's inception. In 2013, the IAB considered a multi-currency numeraire in the form of a trade-weighted basket of the expected purchases of the total economy. The Board concluded that the composition of a trade-weighted basket was unclear because the long-term composition of future purchases of Timor-Leste was ambiguous based on the data available at that time. The IAB chose in 2013 to advise non-hedged currency exposure in the strategic benchmark. The advice assumed some degree of currency exposure in Timor-Leste's future purchases and reflected a belief that multiple currency holdings provided some diversification benefit. This was believed to minimize risk in the true economic numeraire or value of the Fund even though it introduced a small amount of risk when reporting performance in US dollars.

A subsequent review by the Board in the second half of 2016 reassessed the suitability of a multicurrency numeraire. Timor-Leste's import mix had proven to be quite stable since the earlier review, with Indonesia, Singapore, China, Malaysia, Vietnam and Australia accounting for the bulk of imports. While there were still limitations with the data, estimates suggested that by far the bulk of the nation's

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spending is in US dollars, and the price paid in USD is not substantially influenced by the currency of the trading partner. In terms of government spending, almost all expenditure is denominated in US dollars. In view of this updated analysis, the purchasing power of the Fund is best represented primarily by the US dollar, with some degree of exposure to regional trading partners.

The Fund's currency exposures reflects the composition of the equity and bond benchmarks in the Petroleum Fund's asset allocation. These developed market investments provide exposures to the major currencies rather than Timor-Leste's trading partners. It follows that the foreign, non-US dollar investments should be hedged to minimize risk both in economic terms and in terms of the reporting unit. Moreover, analysis also shows that unhedged currency is unlikely to act as a diversifier for a USD investor such as the Petroleum Fund. Instead, currency exposure tends to add to the volatility of equities, non-US bonds and the total portfolio. The Board believes that the risk is unlikely to be rewarded over the long-term as the return from unhedged investments is expected to be in line with the returns from hedged investments.

The Investment Advisory Board therefore recommends amending the non-US sovereign bond mandate so that the currency exposure is hedged. The use of derivatives to reduce the risk of the Fund is permissible under Article 15.7 of the Petroleum Fund Law. Removing the currency volatility will mean that the mandate's returns are more stable. The Board emphasises that this recommendation is based on strategic considerations; the Board does not take a view on the future path of the US dollar.

Implementing hedging and adjusting the bond portfolio

It was initially thought that hedging could be implemented relatively quickly by modifying the agreements with the existing non-US bond managers from an unhedged basis to a hedged basis. However, in early 2017, the Board became aware of difficulties with the Fund's custodian, JP Morgan, executing currency derivatives with external managers. The IAB placed its advice on hold to allow the BCTL to review and report on alternatives to implement hedging. It was found that the BIS is in the unique position of being able to implement hedging as a principal on behalf of the BCTL, either through a currency overlay strategy or by managing the bonds on a hedged basis.

The IAB agrees with the recommendations in the BCTL's report.

- The BIS will be appointed as manager of the hedged non-US bond mandate, replacing the existing external managers. This is preferable from a cost perspective to continuing with the existing bond managers and employing BIS as manager of a separate currency overlay strategy. The BIS is one of the Petroleum Fund's current bond managers and had earlier managed a global bond mandate for the Petroleum Fund. The BIS satisfies the criteria for external managers in Article 12.2 of the Petroleum Fund Law.
- The non-US bond mandate will continue as an enhanced passive mandate. The target tracking error
 is less than 50 basis points, with expected outperformance before fees of 15 basis points over a
 rolling three-year period. The investment universe is expanded to allow AAA and AA-rated
 Supranational, sub-Sovereign and Agency bonds (SSAs).
- The BCTL will replace BIS as manager of the US Treasury 5-10 year mandate. This will be a passive mandate and will be similarly managed to the in-house US Treasury 3-5 year mandate.

The recommended amendments to the mandate parameters are set out in the Appendix. These will need to be reflected in an amended Operational Management Agreement between the Ministry of Finance and the BCTL. The BCTL may consider adding further guidelines on the external mandate, such

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as limits on duration, currency, and SSA exposures, in its Investment Management Agreement with the BIS.

Please contact the Board should Your Excellency require any further information. If your Excellency agrees with the change in the mandate, please instruct the BCTL.

Yours sincerely,

Olgario de Castro

Chairman of the Investment Advisory Board

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Annex: Proposed amendments to the parameters in the Management Agreement

MANDATE	
Asset Class / Management Style	US Government Treasury Notes 5-10 years/ Passive
Allocation	$(10 \pm 1)\%$ of the value of the Fund, measured at the end of each month.
Benchmark	Bank of America Merrill Lynch 5-10 Year US Treasury Index (Bloomberg code "G6O2 Index")
Eligible Instruments	US Government fixed interest instruments
Mandate Objective	The investment objective shall be to passively manage the portfolio close to the benchmark. The indicative tracking error is 25 basis points.
	The difference in the modified duration between the portfolio and the benchmark shall be less than 0.2 years.
Approved Manager	Banco Central de Timor-Leste
Internal Reporting	BCTL will provide quarterly performance reports for the mandate to the Ministry of Finance.
MANDATE	
Asset Class / Management Style	Global Developed Market Sovereign Bonds / Enhanced Passive
Allocation	$(10 \pm 1)\%$ of the value of the Fund, measured at the end of each month.
Benchmark	Barclays Global Treasury Developed Market ex US, with the exposure of 30% Eurozone and 10% Country Capped. Measured on a 100% hedged to US dollar basis.
	(Bloomberg code "H30453US Index")
Eligible Instruments	All securities in the Benchmark index; sovereign bonds from developed market countries that are investment grade and above, excluding the US, as



	defined by the index provider Barclays; Supranational, sub-Sovereign and Agency bonds from developed market countries, excluding the US, that are rated AAA or AA as defined by the index provider Barclays; Cash; and bond and interest rate futures and foreign currency spot and forwards.
Mandate Objective	The portfolio shall be managed in an enhanced passive indexing style.
	The target <i>ex-ante</i> tracking error of the portfolio with the benchmark shall be less than 50 basis points
	The expected outperformance of the portfolio gross of management fees is 15 basis points over the benchmark performance, on an annual basis over a rolling three year period.
Approved Managers	Bank for International Settlements

Investment Advisory Board

Date: 5 July 2019

To

H.E. Sara Lobo Brites

Interim Minister and Vice Minister of Finance Democratic Republic of Timor-Leste

Subject: Proposed Amendments to the Petroleum Fund Law

Dear Interim Minister and Vice Minister,

Thank you for your letter dated 1 July that shared the proposed amendments to the Petroleum Fund Law.

The Investment Advisory Board appreciates the urgency and importance of this matter. Please note that the Board has not received legal advice on the proposed amendments and also relies on the English translation of Article 15A attached to your letter. This advice is necessarily limited to the provisions that relate to the Fund's investments and management, specifically the new Article 15A and its interaction with Article 15. We note and agree with the other amendments, including Article 2, Article 20 and Article 48.

The addition of Article 15A to the Petroleum Fund Law addresses the points raised by the IAB's advice in February 2019 regarding the Petroleum Fund's investment in Timor Gap E.P. That investment was implemented through amendments to the Petroleum Activities Law that worked in conjunction with Article 15.4 of the Petroleum Fund Law. The proposed amendments to the Petroleum Fund Law now explicitly incorporate this investment and its special characteristics. The Board supports consolidating the provisions governing the Fund's investment into the Petroleum Fund Law. It is also useful to clearly divide the Fund's investments into the categories of international financial market investments, which continue to be governed by Article 14 and 15, and the investment in petroleum operations.

IAB's understanding of how the proposed change will apply to the Fund's investments

The new Article 15A specifies the exceptional criteria that apply to the Investments in Petroleum Operations. This includes allowing for investments in national territory as provided for in Article 22.6 of the Petroleum Activities Law; states that the 5% exposure limit is to be calculated at the time of the initial investment; removes the 3% concentration limit to any one company or issuer in Article 15.5; and, in addition to requiring a financial return, explicitly refers to the national economic development objective and accounting for the expected economic and social benefits of the investment. The latter makes it clear that the objective to maximize risk-adjusted returns in Article 14.1 does not apply for this particular investment class. The Board notes that a literal reading of Article 15A allows for a further investment in Petroleum Operations of approximately \$200m before the 5% limit is reached.

The remainder of the Petroleum Fund's investments – now categorized as "Investments in Financial Markets" - will continue to be governed by Article 15 and the rules in Article 14. The rules governing these investments are as follows:

- Offshore investments only (Article 15.1). Domestic investment decisions by the government will be included as part of the budget process, which is financed by withdrawals from the Petroleum Fund.

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- A minimum of 50% of the Petroleum Fund invested in cash and bonds (Article 15.2)
- A maximum of 50% of the Petroleum Fund invested in listed equities (Article 15.3)
- A maximum of 5% of the Petroleum Fund invested in other offshore investments (Article 15.4). Examples
 include international real estate, private equity and hedge funds. This allocation becomes available with
 the addition of Article 15A. Such investments are typically more complex and illiquid than the Fund's
 current public market investments and would require detailed due diligence and structured development
 of capacity.
- A maximum exposure of 3% of the Petroleum Fund in any one issuer or company, other than sovereign issuers (Article 15.5)

In addition, Article 14 provides that the Fund's investment policy has the objective of maximizing risk-adjusted financial returns after taking into account the Fund's purposes, its operational constraints and ability to bear risk. There must also be sufficient liquidity to fund government withdrawals (Article 14.2). The financial market investments in Article 15 are assessed purely on these financial grounds and comply with sound portfolio management practices. As noted, Article 15A is the exception that allows for national economic development objectives and accounting for expected economic and social benefits.

The Board agrees that the Management Agreement can now be amended to separately govern the two categories of investments, Investments in Financial Markets and Investments in Petroleum Operations. The Board notes that the exposure limits specified in Article 15 are to be calculated on a continual basis (i.e. using the current value for the investment and the Petroleum Fund) so as to control for the risk in the portfolio. The Board also notes that the limits in Article 15 refer to the "Petroleum Fund", which means that the value of Article 15A investments are included in the denominator.

The Board agrees with these technical changes to the Petroleum Fund Law, which clearly incorporates the existing investment in Timor Gap E.P. This is not a change to the general policy of the Fund. The Board's advice in February 2019 referred to considering alternative governance structures such as a domestic development funds. Such broader changes would require a far more thorough assessment and public consultation process, similar to that which preceded the Petroleum Fund's creation in 2005 and the amendments to the Petroleum Fund Law in 2011.

Please do not hesitate to contact the Board if you require anything further.

Yours Sincerely

Olgario de Castro

Investment Advisory Board

Dear (005

Chairman

Investment Advisory Board

Date: 21 November 2019

To
H.E. Sara Lobo Brites
Interim Minister and Vice Minister of Finance
Democratic Republic of Timor-Leste

Subject: Review of asset allocation accounting for fiscal policy

Dear Interim Minister and Vice Minister,

Thank you for attending the Investment Advisory Board's offsite workshop in October. We valued the opportunity to continue our discussions earlier in the year regarding the future of the Petroleum Fund. The workshop was part of the Board's annual review of the Petroleum Fund's strategic asset allocation.

As noted during the workshop, the Petroleum Fund has been a great success for Timor-Leste, one which is internationally recognised. The framework has enabled significant savings to be accumulated when petroleum revenues were high, while also financing the government's recurrent expenditure needs as well as domestic investment needs through the government budget. However, in recent years, the Fund's objectives and long-term sustainability have been questioned. The underlying issues were set out in the Investment Advisory Board's advice in 2016, 2018 and 2019 and are briefly recapped below.¹

Withdrawals from the Petroleum Fund help to finance the government's expenditure. The ESI guideline reflects the intended balance on how to share petroleum wealth between current and future generations. If withdrawals are limited to the ESI and the Fund's investments earn a real return of 3 per cent per annum, then the real value of petroleum wealth will be maintained. This allows an even withdrawal profile to equally benefit both current and future generations. However, in reality, withdrawals over the past 10 years have been about 5 per cent of petroleum wealth, not 3 per cent. The government's rationale for not following the ESI rule is that higher withdrawals are needed to lift Timor-Leste's living standards, fund domestic investment and create a cycle of economic growth. However, the share of excess expenditure over the ESI channelled to domestic investments rather than recurrent expenditure has not seemingly been large enough to maintain the balance between current and future generations.

Another challenge is the low long-term returns expected in the prevailing low interest rate environment. A real investment return of 3 per cent would require an equity allocation well in excess of the 50 per cent maximum allowed in the Petroleum Fund Law. Lastly, amending the Petroleum Activities Law to allow the Fund to invest in petroleum operations this year was contrary to the original framework intended in the Petroleum Fund Law. The intention was to separate the Fund's investments in international financial markets from the domestic spending and investment decisions made by Parliament as part of the budget process.

In 2016 the Investment Advisory Board formally expressed its concerns about the level of withdrawals, lower oil revenues and the expected depletion of the Fund. The Board recognised the uncertainty in the projections on government spending and future revenues and recommended waiting for more information before considering significant changes to the investment strategy. Instead, a limited change was proposed with the introduction of a cash portfolio to finance expected withdrawals over the following 12 months. The 2018 strategic asset allocation review restated that the Fund was not sustainable for future generations based on

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¹ IAB letters to the Minister of Finance: "Review of Asset Allocation", 23 September 2016; "Review of Asset Allocation", 11 May 2018; "Petroleum Fund Investment in Petroleum Operations", 15 February 2019.

the assumptions at the time and encouraged policy makers to revisit the ESI framework. The advice recommended maintaining the 40 per cent allocation to equities, while explaining that the expected real return was closer to 2 per cent over the long-term.

Withdrawals have continued at high levels and petroleum revenues have depleted since the Board first raised concerns about the investment horizon of the Fund in 2016. The analysis presented in the October workshop indicates that the Petroleum Fund will be exhausted in a little more than 10 years unless fiscal policy changes. Preliminary analysis suggests that the annual inflows from Greater Sunrise into the Fund will not fill the gap between government expenditure and domestic revenues. This is a critical input when determining a sustainable fiscal policy for Timor-Leste and requires prudent analysis.

Thus, the apparent fiscal policy and available information about total national wealth projects a gradual and total depletion of the Petroleum Fund over the next 10 years. The investment horizon would then be shorter than 10 years for a large portion of the fund. The ability to recoup a loss after a sharp fall in equities is limited within this projected lifespan. Considering both the current circumstances of the Fund and its future trajectory, sequencing risk (the risk of receiving a disadvantageous sequence of returns rather than the mean of the return path) is a concern that must be managed. The Board believes that a gradual reduction in the Petroleum Fund's equity allocation is warranted, starting now. As an illustration, a typical approach would be to reduce equities from the current 35 per cent to, say, 10 per cent over the next five years. The opportunity cost of this change in allocation is a much lower expected return. Given low bond yields, the expected real return from bonds over that horizon is approximately zero.

The Board notes that a sharp reduction in public expenditure is projected once the Fund is depleted as there is insufficient time for substantial growth in domestic revenue. There remains time to plan a sustainable fiscal path and avoid such a fiscal cliff. The ESI is one approach but it seemingly is not a useful fiscal anchor for policy-makers. Instead, a medium-term fiscal plan could be developed to achieve the desired balance between development, the country's absorptive capacity and maintaining some level of savings in the Petroleum Fund. This is a matter for fiscal policy and, as such, falls outside of the IAB's mandate. The IAB therefore encourages the Ministry of Finance to work with the government and other ministries to develop projections on the expected expenditure for the next 10 years, along with the sources of financing, namely domestic revenues, loans and withdrawals from the Fund. The expected petroleum inflows into the Petroleum Fund for the next 10 years must also be provided in order to project the Fund's horizon.

We welcome discussing this in the IAB's next workshop, which is planned to be held in Dili either in April or May 2020 according to Your Excellency's availability. In the absence of new information concerning the cash flow profile of the Petroleum Fund and its investment horizon, the IAB will be obliged to recommend significantly reducing the equity allocation.

Please do not hesitate to contact the Investment Advisory Board if further information is required. The Board stands ready to assist Your Excellency.

Yours Sincerely

Olgario de Castro

Investment Advisory Board

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Chairman

Annex XIII. TLPF implementation of the Santiago Principles

TIMOR-LESTE PETROLEUM FUND

IMPLEMENTATION OF THE GENERALLY ACCEPTED PRINCIPLES AND PRACTICES "SANTIAGO PRINCIPLES"

The Petroleum Fund is an active member of the International Forum for Sovereign Wealth Funds (IFSWF). The "Santiago Principles", 24 Generally Accepted Principles and Practices for sovereign wealth funds, represent the cornerstone of the IFSWF. The Principles are designed to promote good governance, accountability, transparency and prudent investment practices whilst encouraging a more open dialogue and deeper understanding of sovereign wealth fund activities.

All members of the IFSWF voluntarily endorse the Santiago Principles and seek to implement them in their governance and investment practices. Members regularly undertake self-assessments of their adherence to the Principles. The Petroleum Fund's conducts an annual review, which is published in the Fund's Annual Report and on the IFSWF's website.

The Petroleum Fund is not a separate legal entity. The Ministry of Finance is responsible for the overall management of the Petroleum Fund, while the BCTL (Banco Central de Timor-Leste) is appointed as the operational manager. The Ministry of Finance has reviewed the Petroleum Fund's adherence to the Santiago Principles in the table below. This is the ninth self-assessment by the Petroleum Fund.

Key sources are identified for each principle. Reference is made throughout the document to the following formative documents, which are available on the Ministry of Finance website link https://www.mof.gov.tl/budget-spending/petroleum-fund/?lang=en

The Petroleum Fund Law (PF Law). Petroleum Fund Law No. 9/2005, of 3rd of August as amended by the Law No. 12/2011, of 28th of September.

The Petroleum Fund Operational Management Agreement (OMA), 25 June 2009.

The Petroleum Fund Law has been supplemented by amendments to the Petroleum Activities Law No. 13/2005, of 2nd of September, 2nd amendment by the Law No. 6/2019 of 4th of December.

The BCTL's website also provides an overview of the Petroleum Fund, along with the Petroleum Fund's Quarterly Reports and Annual reports with financial statements. Monthly performance reports are also published.

 $\underline{https://www.bancocentral.tl/en/go/about-petroleum-fundhttps://www.bancocentral.tl/en/go/publications-key-report-petroleum-fund-report}$

Information on the Petroleum Fund's Investment Advisory Board (IAB) is published on the Ministry of Finance and BCTL websites:

https://www.mof.gov.tl/budget-spending/petroleum-fund/?lang=en

https://www.bancocentral.tl/en/go/investment-advisory-board3

Principle	Implementation
I. Legal framework, object	ives, and coordination with macroeconomic policies
1. The legal framework for the SWF should be sound and support its effective operation and the achievement of its stated objective(s).	The Timor-Leste Petroleum Fund was established to fulfil the requirement in the Constitution for the establishment of mandatory financial reserves from the exploitation of the natural resources.
1.1. The legal framework for the SWF should ensure legal soundness of the SWF and its transactions.	Timor-Leste's Parliament established the legal framework for the Petroleum Fund in the Petroleum Fund Law. This was supplemented by amendments to the Petroleum Activities Law.
1.2. The key features of the SWF's legal basis and structure, as well as the legal relationship between the	The Fund is formed as an account of the Ministry of Finance held in the Central Bank of Timor-Leste (BCTL, Banco Central de Timor-Leste), rather than as a separate legal entity.
SWF and other state bodies, should be publicly disclosed.	 The Petroleum Fund Law - provides mechanisms that assist Timor-Leste to sustainably manage its petroleum revenue, details the parameters for operating and managing the Petroleum Fund, defines the asset allocation guidelines and risk limits, governs the collection and management of the receipts, regulates transfers to the State Budget,
	 defines clear roles and responsibilities of the entities involved in the management of the Fund, and provides for accountability and oversight of these activities.
	The Petroleum Fund Law requires the Minister of Finance to enter into an agreement with the Operational Manager. The Operational Management Agreement was signed between the Ministry of Finance and the Operational Manager (BCTL) on 12 October 2005 with later amendments. It specifies the key functions and competencies of the Ministry of Finance, which is responsible for the overall management of the Fund, and the BCTL, which is responsible for the operational management of the Fund.
	Sources: Petroleum Fund Law, Petroleum Activities Law, Operational Management Agreement
2. The policy purpose of the SWF should be clearly defined and publicly disclosed.	The Petroleum Fund accumulates petroleum revenues from the extraction of natural resources. The preamble of the Petroleum Fund Law decrees that the purpose of establishing the Fund is to contribute to a prudent management of the petroleum resources for the benefit of both current and future generations. The Petroleum Fund is a tool that contributes to sound fiscal policy, where appropriate consideration and weight is given to the long-term interest of Timor-Leste's citizens. The Petroleum Fund finances government expenditure and acts as a savings vehicle for future generations.
	Explanations of the purpose of the Petroleum Fund are provided by the Ministry of Finance in the Annual Report, along with regular public consultations.
	Sources: Petroleum Fund Law, Annual Reports
3. Where the SWF's activities have significant direct domestic macroeconomic implications, those activities should be closely coordinated with the domestic fiscal and monetary authorities, so as to	The Petroleum Fund is integrated into the State Budget. Transfers are made from the Petroleum Fund to the State Budget to finance the government's budget deficit. Transfers are guided by the Estimated Sustainable Income (ESI), the amount that can be transferred without depleting the long-term real value of Petroleum Wealth, thereby ensuring the sustainability of the Fund.

Principle	Implementation
ensure consistency with the overall macroeconomic policies.	The Petroleum Fund's investments are primarily in overseas financial market instruments. Following amendments to the Petroleum Activities Law, the Fund can also invest in petroleum operations in the national territory or abroad, subject to a 5% exposure limit. The Ministry of Finance is responsible for the overall management of the Petroleum Fund and also coordinates the preparation, discussion and execution of the government's budget.
	Sources: Petroleum Fund Law, Petroleum Activities Law
4. There should be clear and publicly disclosed policies, rules, procedures, or arrangements in relation to the SWF's general approach to funding, withdrawal, and spending operations. 4.1. The source of SWF funding should be publicly disclosed.	The Petroleum Fund Law clearly defines the methods of funding and withdrawals. All of Timor-Leste's petroleum revenues flow into the Petroleum Fund. The Petroleum Fund Law defines what constitutes petroleum fund receipts and sets out the mechanisms for handling these receipts. The returns on the Petroleum Fund's investments also contribute to its capital.
4.2. The general approach to withdrawals from the SWF and spending on behalf of the government should be publicly disclosed.	The Petroleum Fund Law also sets out the requirements for withdrawals. The only permissible transfers out of the Petroleum Fund is to the State Budget. The State Budget identifies the contribution made by the Fund to the government's expenditure. Withdrawals are guided by the ESI rule (GAPP 3). Parliament may approve a Budget transferring more than the ESI where the Government has provided justification that it is in the long-term interest of Timor-Leste.
	Detailed information about receipts and transfers to the government are publicly disclosed in the Petroleum Fund's Annual Reports, the General State Budget from the Ministry of Finance, and the Petroleum Fund's quarterly and monthly reports from the BCTL.
	A complete list of all entities making payments to the Petroleum Fund is published annually both in the Petroleum Fund's Annual Report and in Timor-Leste EITI (Extractive Industries Transparency Initiative) reports. Timor-Leste was accepted as an EITI compliant country on 1 July 2010.
	Sources: Petroleum Fund Law, Annual Reports, Quarterly Reports, TL-EITI website www.eiti.gov.tl
5. The relevant statistical data pertaining to the SWF should be reported on a timely basis to the owner, or as otherwise required, for inclusion where appropriate in	Transparency is a fundamental principle of the Petroleum Fund Law. The Law sets out the requirements for all entities involved in the management of the Fund to provide and publish the reports pertaining to the activities of the Fund.
macroeconomic data sets.	The Ministry of Finance prepares and publishes the Petroleum Fund's Annual Report along with the Petroleum Fund's financial statements. The Law requires an international accredited auditor to issue and publish an annual audit report on the Fund's financial statements. The Ministry of Finance also prepares the State Budget for the National Parliament.
	The BCTL, on a quarterly basis, provides reports to the Minister of Finance on the Fund's performance and market value over the quarter. The BCTL also publishes a monthly report on the Fund.
	All information is publicly available on the MoF and BCTL websites.

Principle	Implementation
•	Sources: Petroleum Fund Law, Annual Reports, Quarterly Reports, Monthly Performance Reports
II. Institutional Framework	and Governance Structure
6. The governance framework for the SWF should be sound and establish a clear and effective division of roles and responsibilities in order to facilitate accountability and operational independence in the management of the SWF to pursue its objectives.	The Parliament of Timor-Leste established the Petroleum Fund Law, which defines the roles and responsibilities of the entities involved in the management of the Fund. The Minister of Finance is responsible for the overall management of the Petroleum Fund. The Minister of Finance sets the investment policy, enters into a management agreement with the Operational Manager and monitors the Fund's performance. The Investment Advisory Board (IAB) provides independent advice to the Minister of the investment policy and management, including the investment mandates for the Fund. The BCTL, as Operational Manager, is responsible for the Fund's operations including implementing the investment mandates set by the Minister of Finance. The BCTL manages some of the portfolio internally and also contracts with external managers and monitors their performance. Sources: Petroleum Fund Law, Operational Management Agreement.
7. The owner should set the objectives of the SWF, appoint the members of its governing body(ies) in accordance with clearly defined procedures, and exercise oversight over the SWF's operations.	Parliament, representing the people of Timor-Leste, sets the objectives of the Fund in the Petroleum Fund Law (GAPP 1). The Petroleum Fund Consultative Council (PFCC) is a statutory body appointed to advise Parliament on matters relating to the Petroleum Fund.
	The Petroleum Fund Law defines the broad asset allocation and risk limits. The Minister of Finance is responsible for the overall management of the Fund, which includes determining the investment policy in accordance with the provisions in the Law. The Minister of Finance presents to Parliament the investment policy and any changes to the principal asset allocation that will materially impact on the Fund's overall level of risk. The Minister of Finance sets the investment mandates, which reflect the acceptable level of risk. The Ministry of Finance also exercises oversight of the overall Fund.
	The Minister of Finance receives independent advice from the Investment Advisory Board (IAB) on the investment strategy and management of the Fund. The Prime Minister appoints members of the IAB on the advice of the MoF.
	The Central Bank is the Operational Manager. The BCTL's specific responsibilities are set out in an Operational Management Agreement with the Minister of Finance. This includes reporting requirements that allow the Ministry of Finance to exercise its oversight role.
	Sources: Petroleum Fund Law, Operational Management Agreement
8. The governing body (ies) should act in the best interests of the SWF, and have a clear mandate and adequate authority and competency to carry out its functions.	The Minister of Finance has the authority and competency to determine the strategy and policies to achieve the Petroleum Fund's objectives. The Minister of Finance is supported by the Petroleum Fund Administration Unit at the MoF. The BCTL has been delegated the responsibility for operational management. The Operational Management Agreement seeks to ensure that the BCTL acts in the best interests of the Fund and sets out the operational manager's responsibilities.

Principle	Implementation
	In carrying out his/her functions, the Minister of Finance is required to seek advice from the IAB. The Law requires that at least three of the IAB members have significant knowledge and experience in financial investment management.
	Further to the discussion in Principle 7, the Minister of Finance is accountable to the Parliament and is required to provide relevant reporting. The composition, role and authority of the PFCC aim to safeguard the proper management of the Petroleum Fund.
	Sources: Petroleum Fund Law, Operational Management Agreement.
9. The operational management of the SWF should implement the SWF's strategies in an independent manner and in accordance with clearly defined responsibilities.	The Petroleum Fund Law defines the roles and responsibilities of the Operational Manager, the BCTL. The BCTL's specific responsibilities are clearly set out in the Operational Management Agreement (OMA) with the Minister of Finance. The BCTL is delegated with authority to make decisions relating to the operational management of the Fund as set out in the OMA. The Operational Manager is able to deduct reasonable management expenses, in accordance with the OMA.
	Sources: Petroleum Fund Law, Operational Management Agreement.
10. The accountability framework for the SWF's operations should be	Accountability arrangements are detailed in the Petroleum Fund Law and the Operational Management Agreement.
clearly defined in the relevant legislation, charter, other constitutive documents, or management agreement.	The Ministry of Finance is accountable to Parliament and the public. The Minister of Finance reports to the Parliament on the performance of the Fund on an annual basis and is required to publish all advice received from the IAB unedited in the Annual Report, or earlier upon request.
	The Operational Manager, the BCTL, is appointed by the Minister of Finance and is accountable to the Minister for operational management of the Petroleum Fund. The BCTL may appoint external investment managers subject to the Minister's consent. The BCTL reports to the Minister on the Fund's performance on a quarterly basis. These reports are published and available on the Central Bank's website.
	Sources: Petroleum Fund Law, Operational Management Agreement, Quarterly Reports, Annual Report.
11. An annual report and accompanying financial statements on the SWF's operations and performance should be prepared in a timely fashion and in accordance with recognized international or national accounting standards in a consistent manner.	The Petroleum Fund Law requires the government to prepare and submit to the Parliament an annual report of the Fund's operations and performance for the fiscal year, including financial statements prepared to International Financial Reporting Standards and audited by an internationally recognized auditor, at the same time as the annual financial statements of that year. The Law identifies the minimum information to be disclosed in the Annual Report.
	The Petroleum Fund Law provides that the Director of Treasury of the Ministry of Finance is responsible for maintaining the Petroleum Fund accounts and records, and preparing financial statements, in accordance with the International Financial Reporting Standards. This responsibility is delegated to the BCTL as Operational Manager.
	Sources: Petroleum Fund Law, Operational Management Agreement, Annual Report.

Principle	Implementation
12. The SWF's operations and financial statements should be audited annually in accordance with recognized international or national auditing standards in a consistent manner.	The Petroleum Fund Law requires the annual financial statements to be audited by an internationally recognized accounting firm. The international auditor is appointed by the Ministry of Finance and is subject to strict qualification criteria and a transparent selection process. The audited financial statements are submitted to the Parliament together with the Petroleum Fund Annual Report.
	The Petroleum Fund Law also requires the accounts, records and other documents relating to the Petroleum Fund to be internally audited every six months. This is undertaken by the BCTL's Internal Audit, which is independent from the investment management area.
	Sources: Petroleum Fund Law, Operational Management Agreement, Annual Report.
13. Professional and ethical standards should be clearly defined and made known to the members of the SWF's governing body(ies), management,	Each of the Petroleum Fund's institutions have professional and ethical standards to ensure the soundness and integrity of the Fund's operations.
and staff.	The professional and ethical standards for the Ministry of Finance's staff are defined by the Public Service Law no. 8/2004, 16 th of June, as amended by Law no.5/2009, 15 th of July.
	All the staff of the Operational Manager are bound by the BCTL's Code of Conduct. https://www.bancocentral.tl/en/go/code-of-conduct
	The Petroleum Fund Law also requires members of the IAB, before taking office, to declare in writing that their appointment has no conflicts with any personal or family interests. The IAB has established its own Standard of Conduct in its Operational Regulations, which includes disclosures of potential conflicts of interest. The Operational Regulations are published on the Ministry of Finance website.
	Sources: Petroleum Fund Law, BCTL, MoF and Ministry of Justice websites. http://www.mj.gov.tl/jornal/public/docs/2009/serie_1/serie1_no25.pdf
14. Dealing with third parties for the purpose of the SWF's operational management should be based on economic and financial grounds, and follow clear rules and procedures.	The BCTL's dealings with third parties as operational manager are based on economic and financial grounds and follow clear procedures.
	The Operational Management Agreement provides that the BCTL is responsible for the tendering and selection process of external investments managers. This is based on the parameters for the investment mandate provided by the Minister of Finance. The Petroleum Fund Law also specifies minimum requirements. The Minister must be satisfied that each external investment manager has sufficient equity, guarantees and insurance; a sound record of operational and financial performance; and has business references and a reputation of the highest standard.
	The BCTL is responsible for tendering for other service providers, including the Petroleum Fund's custodian. The BCTL's selection procedure is rigorous, fair and transparent and in compliance with the substantive provisions of Timor-Leste's laws.
	Sources: Petroleum Fund Law, Operational Management Agreement.

Principle	Implementation
15. SWF operations and activities in host countries should be conducted in compliance with all applicable regulatory and disclosure requirements of the countries in which they operate.	The Petroleum Fund Law requires the management of the Petroleum Fund to be conducted in compliance with all applicable regulatory and disclosure requirements of the countries in which the investments are made. Source: Petroleum Fund Law.
16. The governance framework and objectives, as well as the manner in which the SWF's management is operationally independent from the owner, should be publicly disclosed.	The Petroleum Fund's governance framework and objectives are established by Parliament in the Petroleum Fund Law. The Operational Management Agreement provides details of the division of responsibilities between the Ministry of Finance and the BCTL, along with accountability arrangements. The Minister of Finance is required to seek advice from the IAB, an independent Board staffed by investment experts, before making any decision relating to the Fund's investment strategy and management. Information on the governance framework and objectives is published in the Petroleum Fund's Annual Report. Sources: Petroleum Fund Law, Operational Management Agreement.
17. Relevant financial information regarding the SWF should be publicly disclosed to demonstrate its economic and financial orientation, so as to contribute to stability in international financial markets and enhance trust in recipient countries.	Information regarding the Petroleum Fund's asset allocation, its investment mandates and benchmarks and investment performance are published in the BCTL's quarterly performance reports and the Petroleum Fund's Annual Report and audited financial statements. A list of the Petroleum Fund's holdings is provided in the Annual Report. The reports are available on the BCTL's website. Sources: Petroleum Fund Law, Operational Management Agreement Annex 1, Quarterly Reports, Annual Report.
III. Investment and Risk Management Framework	

- 18. The SWF's investment policy should be clear and consistent with its defined objectives, risk tolerance, and investment strategy, as set by the owner or the governing body(ies), and be based on sound portfolio management principles.
- 18.1. The investment policy should guide the SWF's financial risk exposures and the possible use of leverage.
- 18.2. The investment policy should address the extent to which internal and/or external investment managers are used, the range of their activities and authority, and the process by which they are selected and their performance monitored.
- 18.3. A description of the investment policy of the SWF should be publicly disclosed.

The Fund's investment policy is directed by the provisions in the Petroleum Fund Law that define the asset allocation guidelines, eligible investments, concentration limits and investment principles, which include diversification and maximizing the risk-adjusted financial return.

The Ministry of Finance, on behalf of the government, determines the investment policy, which is designed to meet the investment objectives of the Fund after taking into account the risk preference of the Timor-Leste people and any constraints under which the Fund operates. The IAB advises on the investment strategy. The advice of the IAB is guided by its publicly disclosed Investment Beliefs and Principles.

The investment policy is described in the Petroleum Fund's Annual Report. Annex 1 of the Operational Management Agreement specifies the Fund's strategic asset allocation and benchmark portfolio, the parameters for each of the investment mandates and the permissible use of derivatives.

The Ministry of Finance, with advice from the IAB, determines whether a mandate will be internally or externally managed. The Ministry of Finance monitors the internally managed mandates. The selection process for external investment managers is undertaken by the BCTL as operational manager and is based on professional and commercial criteria. The external managers are given clearly defined mandates, including expected performance, risk and fees. Their performance is monitored by the BCTL.

Principle	Implementation
Timespie	Sources: Petroleum Fund Law, Operational Management Agreement,
	Quarterly Reports, Annual Report.
19. The SWF's investment decisions should aim to maximize risk-adjusted financial returns in a manner consistent with its investment policy, and based on economic and financial grounds. 19.1. If investment decisions are subject to other than economic and financial considerations, these should be clearly set out in the investment policy and be publicly disclosed. 19.2. The management of an SWF's assets should be consistent with what is generally accepted as sound asset management principles.	The Petroleum Fund Law states that the aim of the investment policy is to maximize risk-adjusted financial returns after taking into account the purposes of the Fund and Timor-Leste's ability to bear risk. The Petroleum Fund's investments in offshore financial market instruments are based solely on these financial grounds. The Petroleum Activities Law allows for the Petroleum Fund to invest in petroleum operations in national territory or overseas, subject to a 5% exposure limit. Economic development objectives may be accounted for in the investment decision in addition to financial considerations. The proposed allocation is required to be presented to Parliament and the rules and criteria for the investment need to be published. Sources: Petroleum Fund Law, Petroleum Activities Law.
20. The SWF should not seek or take advantage of privileged information or inappropriate influence by the broader government in competing with private entities.	The Petroleum Fund's financial market investments are in offshore markets. The Fund has no access to privileged information or inappropriate influence from the broader government in competing with private entities. The objective of the Petroleum Fund's investment in petroleum operations is to facilitate the development of a national petroleum industry. Economic development will encourage private investment in Timor-Leste.
21. SWFs view shareholder ownership rights as a fundamental element of their equity investments' value. If an SWF chooses to exercise its ownership rights, it should do so in a manner that is consistent with its investment policy and protects the financial value of its investments. The SWF should publicly disclose its general approach to voting securities of listed entities, including the key factors guiding its exercise of ownership rights.	The BCTL, as operational manager, exercises the Petroleum Fund's shareholder ownership rights by engaging the Institutional Shareholder Services (ISS) proxy voting service.
22. The SWF should have a framework that identifies, assesses, and manages the risks of its operations.	The Petroleum Fund Law requires the Minister and the Operational Manager to develop and maintain policies, systems and procedures to ensure that the risks associated with the implementation of the investment strategy are identified, monitored and managed.
22.1. The risk management framework should include reliable information and timely reporting systems, which should enable the adequate monitoring and management of relevant risks within acceptable parameters and levels, control and incentive mechanisms, codes of conduct, business continuity planning, and an independent audit function.	The BCTL has developed an operational risk management framework for the Petroleum Fund. This includes a risk register that identifies the owner of the risk and the internal controls. The BCTL's Internal Audit area is independent from the investment management area and monitors that procedures are being followed and that the framework is effective. All the staff of the BCTL are bound by its Code of Conduct. The financial risk in the Petroleum Fund's strategy follows from the Ministry of Finance's investment policy, specifically the parameters for the global mandate and the investment mandates included in Annex 1 of the Operational Management Agreement. These conform with the financial parameters in the Petroleum Fund Law. The

Principle	Implementation
22.2. The general approach to the SWF's risk management framework should be publicly disclosed.	appropriate level of financial risk is assessed during the regular asset allocation reviews. The Minister of Finance is required to present the investment policy to Parliament on an annual basis with the Annual Report or prior to making any changes to the principal asset allocation.
	The BCTL manages the global mandate, which includes rebalancing individual mandates to target allocations. The BCTL also monitors the compliance of the external managers with their risk targets. The BCTL reports on compliance to the Ministry of Finance in the quarterly performance report.
	The Ministry of Finance monitors the Fund's performance including its risk exposure through the BCTL's quarterly performance reports. The Minister of Finance reports to the Parliament on an annual basis.
	Sources: Petroleum Fund Law, Operational Management Agreement, Quarterly Reports, Annual Reports.
23. The assets and investment performance (absolute and relative to benchmarks, if any) of the SWF should be measured and reported to the owner according to clearly defined principles or standards.	The Petroleum Fund Law requires the Operational Manager (BCTL) to report to the Minister of Finance on a quarterly basis the performance and activities of the Petroleum Fund relative to the benchmarks.
	Performance reporting is prepared by the Fund's custodian, JP Morgan, in compliance with the Global Investment Performance Standards (GIPS) methodology. The quarterly report is published within 40 days after the end of every quarter.
	Sources: Petroleum Fund Law, Quarterly Reports.
24. A process of regular review of the implementation of the GAPP should be engaged in by or on behalf of the SWF.	The Ministry of Finance intends to review the Petroleum Fund's implementation of the Santiago Principles annually and publish the self-assessment in the Annual Report. This is the ninth review. The Petroleum Fund conducted its first review in 2010.
	Source: Annual Reports.



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