

13.05.2019 / Insurance Strategy & Advisory

# IFRS 9: Investment Implications

How the accounting standard can affect the investment strategy of insurance companies

## Summary

Since its effective date on 01 January 2018, IFRS 9 has changed the way in which institutional investors have to classify and measure their financial assets. For insurers, the IASB has proposed to postpone the effective date of IFRS 9 to 2022, so that it will become effective together with IFRS 17, the new insurance contract standard. For most insurers, the transition from IAS 39 to IFRS 9 will result in more assets being measured at fair value and corresponding volatility of reported profits. This in turn may drive changes in an insurer's investment strategy and encourage a more disciplined management of their balance sheet.

### Main Takeaways

#### Fixed Income

Depending on an insurer's business model, debt instruments can be either measured at amortised costs or at fair values with unrealised gains or losses being recorded directly on the passive side of the balance sheet without going through profit or loss (P&L) before realisation. Only (expected) impairment gains or losses are directly recorded in P&L which may encourage a more thorough credit analysis. An insurer can also choose to measure fixed income investments at fair value through profit or loss in order to reduce accounting mismatches.

#### Equities

Equity instruments are typically measured at fair value through P&L. For any equity instrument not held for trading, an investor can make an irrevocable election to present changes in fair values in other comprehensive income (OCI) without going through P&L. In contrast to fixed income investments, these capital gains or losses cannot be 'recycled' to P&L once they have been realised. This could discourage long-term equity investments. As dividend

income is recorded directly in the P&L, high dividend strategies may be more attractive under the new provisions.

#### Investment funds

Under IFRS 9, there is no look-through for non-consolidated funds. Funds are typically classified as puttable instruments, which are measured at fair value through P&L. Depending on the underlying exposure, this can lead to a strategic disadvantage compared to a direct investment in these assets. Therefore, an insurer may consider to switch fund exposures into direct mandates or focus on less volatile fund strategies to reduce P&L volatility.

#### Risk management

Besides new rules regarding the classification and measurement of financial instruments, IFRS 9 also introduces new provisions regarding hedge accounting. In general, hedge accounting will become easier under IFRS 9 better reflecting common practices in risk management. For example, the 80%-125% effectiveness test under IAS 39 has been replaced by more qualitative criteria. This may further encourage the use of derivatives for risk management purposes, e.g. to hedge long-dated liabilities.



**Marlon Rockenfeller**  
Head of Insurance Strategy & Advisory  
EMEA & APAC



**Thomas Gillmann**  
Insurance Strategy & Advisory  
EMEA & APAC

## Fixed Income

Under IFRS 9, a debt instrument can be classified and measured under three categories (see Figure 1).

### FIGURE 1. CLASSIFICATION & MEASUREMENT

Amortised Cost	The instrument is carried at amortised cost. That is the amount at which the instrument was measured at initial recognition (usually cost) less any repayments of principal, plus or less the cumulative amortisation of any difference between the initial amount and the final maturity amount using the effective interest method, adjusted for any impairment gains or losses. Interest income is recognised in P&L using the effective interest method.
Fair Value through Other Comprehensive Income (OCI) – With recycling	The instrument is carried at fair value with all unrealised changes in fair values being recorded in the equity item 'Other comprehensive Income (OCI)' without going through P&L. The changes in fair values are reclassified ('recycled') to P&L when the instrument is sold. Interest income is directly recognised in P&L.
Fair Value through Profit or Loss (P&L)	The instrument is carried at fair value with all (unrealised) changes in fair values being recorded in P&L.

The classification of a debt instrument into one of the three categories depends on a two-stage assessment process. First, the debt instrument must pass the so-called SPPI test assessing if the instrument's contractual cash flows represent 'Solely Payment of Principal and Interest' (SPPI). In other words, the SPPI test separates 'plain' bonds from more complex debt instruments that, for example, give exposure to equity-like risks. If an instrument fails the SPPI test, it must be classified at fair value through P&L. Otherwise, the instrument will go through the second test, the business model test. IFRS 9 identifies three business models (see Figure 2).

### FIGURE 2. BUSINESS MODELS

Hold to collect	Objective is to hold a debt instrument to collect their contractual cash flows. Sales are not prohibited in general but are considered incidental to this business model, e.g. for risk management purposes.
Hold to collect and sell	Objective is both collecting contractual cash flows as well as selling a debt instrument. Sales are rather integral than incidental to this business model.
Other	Instruments are mainly held for trading.

Any debt instrument that passes the SPPI test and that is held to collect contractual cash flows can be measured at amortised costs. If an instrument is held for both collecting contractual cash flows and selling, it is measured at fair value with unrealised fair value changes recorded directly on the passive side of the balance sheet in other comprehensive income (OCI) without going through P&L.

The resulting gains and losses are derecognised in OCI and recognised in P&L once they have been realised, i.e. when the debt instrument is sold. This process is referred to as 'recycling'. It can be assumed that a large portion of insurers fixed income assets are allocated to the 'hold to collect and sell' business model. For any instrument that is held under the business model 'Other', all unrealised and realised gains or losses are recognised directly in P&L. Additionally, an insurer has also the option to recognise any other debt instrument at fair value through P&L in order to reduce accounting mismatches.

### Impairment

Every debt instrument that is not measured at fair value through P&L is subject to an impairment model measured on the basis of expected credit losses (ECL). Under IAS 39, bonds were subject to an allowance for incurred credit losses. In contrast, IFRS 9 takes a forward-looking approach by recognising the anticipated impairment of a bond at each reporting date. As outlined in Figure 3, the general impairment model is based on three stages. The general impairment model applies to all instruments that are not already credit-impaired at initial recognition or that are eligible for a simplified approach (e.g. trade receivables).

### FIGURE 3. GENERAL IMPAIRMENT MODEL: 3 STAGES

	Increase in credit risk since initial recognition	Impairment	Interest Income
Stage 1	Not significant	12-month Expected Credit Loss	Effective interest on gross carrying amount
Stage 2	Significant	Lifetime Expected Credit Loss	Effective interest on gross carrying amount
Stage 3	Credit-impaired	Lifetime Expected Credit Loss	Effective interest on net carrying amount (amortised cost)

At initial recognition, a debt instrument is considered at **stage 1** and a loss allowance must be made immediately by recognising the 12-month ECL. The 12-month ECL is the expected credit loss that would result from a default event occurring within the next 12 months. This is not the amount of expected credit losses within the next 12 months but the entire credit loss on a bond weighted by the probability that the default event will occur in the next 12 months:

$$ECL_{12\text{ month}} = LGD \times PD_{12\text{ month}} \times EAD$$

$ECL_{12\text{ month}}$	= 12 month Expected Credit Loss
$LGD$	= Loss Given Default
$PD_{12\text{ month}}$	= Probability of Default of the issuer within next 12 months
$EAD$	= Exposure at Default

For each instrument that is not determined to carry a low credit risk – typically defined as bonds with an investment grade rating –, an insurer has to assess at each reporting date whether the credit risk has increased significantly since initial recognition. An increase in credit risk is assessed by a significant increase in the probability of default of a bond, taking into account reasonable and supportable information including forward-looking data. The term ‘significant’ is not further specified. For example, the Bloomberg ECL model assumes that the credit risk of a bond has increased significantly if its lifetime probability of default has doubled and increased by at least 0.2 percentage points. In case of a significant increase in credit risk (**stage 2**), the impairment loss has to reflect the lifetime ECL which are the probability-weighted credit losses occurring over the entire lifetime of the bond:

$$ECL_{Lifetime} = LGD \times PD_{Lifetime} \times EAD$$

- $ECL_{Lifetime}$  = Lifetime Expected Credit Loss
- $LGD$  = Loss Given Default
- $PD_{Lifetime}$  = Probability of Default of the issuer within next lifetime
- $EAD$  = Exposure at Default

Regardless of any individual definitions, the credit risk is always considered as significantly increased if any contractual payments are more than 30 days past due. If the bond is more than 90 days past due or if there is other evidence of financial distress (for example, a legal bankruptcy or default), the instrument is classified as credit-impaired (**stage 3**). Effectively, these bonds were already subject to an impairment under IAS 39. Like instruments allocated to stage 2, credit-impaired instruments are also subject to a loss allowance equal to the lifetime ECL. However, there is a difference in the way interest income is calculated for stage 2 and stage 3 bonds measured at amortised cost. Interest income for stage 2 bonds is calculated on the gross carrying amount of the bond, this is the amortised costs before deducting the lifetime ECL. In contrast, the interest income for stage 3 bonds is calculated on amortised costs which already reflect a lifetime ECL allowance.

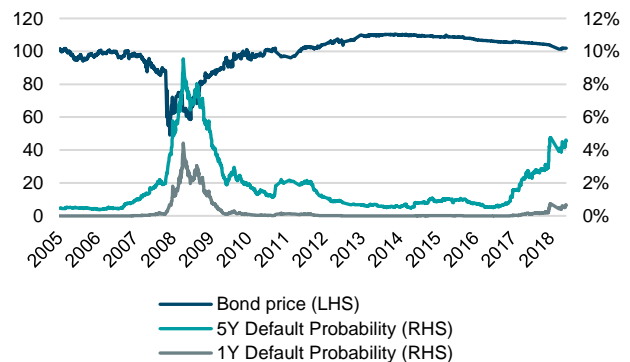
The impairment losses or gains resulting from changes in the amount of ECL are recognised in P&L which results in additional P&L volatility compared to the impairment model under IAS 39. Hence, insurance companies may conduct a more prudent credit analysis and selection of bonds in order to avoid significant increases in credit risk of their fixed income portfolios and therefore P&L volatility.

**Example: General Electric**

On 22 November 2005, General Electric issued a JPY-denominated senior unsecured bond with a coupon rate of

2.215% (ISIN: JP584112C5B0). The bond started with a AAA rating on the issuance date and subsequently saw several downgrades until it has entered the high yield space in October 2018.

**FIGURE 4. GENERAL ELECTRIC BOND**



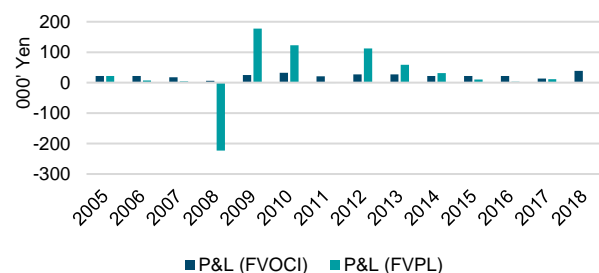
Past performance is not a reliable indicator of future returns. Source: Bloomberg LP. As of: 31 December 2018

Figure 5 illustrates the P&L pattern that would result for an investor allocating JPY 1 million to the bond on the issuance date and selling the bond on 1 January 2018. Following simplifications were made in the calculation:

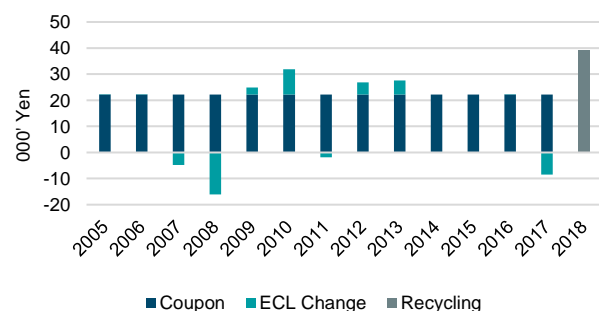
- \_ The 5Y default probability is used as a proxy for the lifetime default probability
- \_ Constant loss given default of 50%
- \_ Bond is not classified as a low risk bond

**FIGURE 5. P&L DEVELOPMENT**

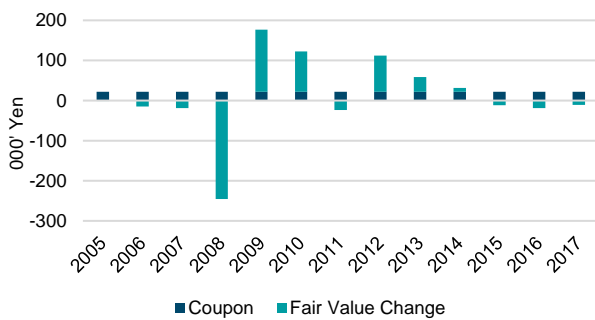
**Total – Fair Value Through OCI vs. Fair Value Through P&L**



**Detail – Fair Value Through OCI**

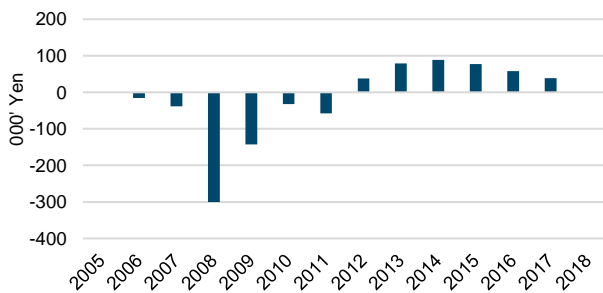


Although information in this document has been obtained from sources believed to be reliable, we do not guarantee its accuracy, completeness or fairness, and it should not be relied upon as such. The information herein reflects our current views only, are subject to change, and are not intended to be promissory or relied upon by the reader. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. DWS International GmbH. As of: 07.05.2019

**Detail – Fair Value Through P&L**

This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or solicitation. Source: DWS International GmbH. As of: 01 January 2018

The P&L for the bond measured at fair value through OCI is mainly driven by coupon payments and changes in the ECL. The bond started in stage 1 and was allocated to stage 2 in 2007 due to a significant increase in credit risk. Hence, a loss allowance was made using the lifetime ECL resulting in a drop in P&L. The lifetime ECL has further increased in 2008 offsetting almost the entire interest income for that year. This is also true for the year 2017. The example illustrates that changes in ECL can result in a certain degree of P&L volatility which, however, is significantly lower than the P&L volatility that would result if the bond would be measured at fair value through P&L without recognising any impairment gains or losses.

**FIGURE 6. OCI DEVELOPMENT**

Source: DWS International GmbH

**Equities**

Equity instruments are typically measured at fair value with value changes recognised in profit or loss. For equity instruments that are not held for trading, an insurer can make an irrevocable election to present unrealised capital gains or losses in other comprehensive income to avoid P&L volatility. In contrast to fixed income investments, there is no way that the capital gains or losses recorded in OCI find their way to the P&L once they have been realised by selling the equity instrument. Under IAS 39, this 'recycling' was possible for any equity instrument classified as

Available-for-Sale (AfS). Removing the possibility for recycling has been criticised by many long-term equity investors that want to see their long-term investment results reflected in P&L. In 2017, the European Commission (EC) has asked the European Financial Reporting Advisory Group (EFRAG) to conduct further research on this topic. After seeking consultation from various stakeholders, EFRAG came to the conclusion that there is not yet enough evidence for or against the reintroduction of recycling. According to EFRAG, this might be due to the fact that IFRS 9 is relatively new and only very limited evidence of its practical implications is available. Additionally, the nature of OCI vs. P&L has not yet fully been researched. However, EFRAG clearly recommends to also reintroduce a kind of impairment model in case recycling would be reintroduced. Dividend payments received on equities elected for presentation at fair value through OCI are still recorded in the P&L. Therefore, high dividend equity strategies may become an attractive investment opportunity.

For all other equities that are measured at fair value through P&L by default, an insurer must allow for a larger P&L budget. However, an insurer may also choose to invest in less volatile strategies in order to reduce P&L volatility. This can be either achieved by portfolio construction (low volatility strategies) or by using derivatives like protective put options. Using derivatives for hedging purposes is further facilitated by new hedge accounting rules better reflecting common practices in risk management.

**Investment Funds**

The previous sections only focus on direct investments into fixed income and equity instruments. But insurers typically also hold assets via investment funds. The treatment of investment funds under IFRS 9 is different for funds that are consolidated to the insurer's balance sheet like dedicated funds and for collective investment vehicles that are not consolidated.

**Non-consolidated funds**

In contrast to Solvency II, there is no look-through for non-consolidated investment funds under IFRS 9 which would allow to classify and measure each fund holding individually. As funds typically include a contractual obligation for the issuer to redeem the fund for cash or the underlying assets, they are classified as puttable instruments as defined in IAS 32. A puttable instrument represents a debt instrument which is subject to the SPPI test under IFRS 9 and most funds are structured in a way that they would fail the SPPI test. Probably, only some specific closed-ended fixed income funds may meet the SPPI criterion and may be recognised in OCI. Hence, most investment funds are

required to be measured at fair value through P&L. This obviously leads to a strategic disadvantage compared to any direct investment that might be eligible for a different treatment than fair value through profit or loss. For example, a direct bond investment can be either measured at amortised costs or fair values through OCI while the same investment via a mutual fund is required to be measured at fair value through P&L.

### Consolidated funds

Under IFRS 10, certain funds – like dedicated funds that are 100% owned by one insurer – have to be consolidated to the insurer's balance sheet. In this way, the wrapper ceases to exist from an accounting perspective and the underlying assets are subject to all measurement methods offered by IFRS 9 (depending on the business model and SPPI test). Therefore, where the portfolio size is sufficient to do so, an insurer may choose to switch certain fund exposures to dedicated funds or direct mandates. Otherwise, insurers may focus on less volatile investments via funds in order to reduce P&L volatility.

### Hedge Accounting

Hedge accounting allows to recognise economic hedge relationships also from an accounting perspective. In this way, hedge accounting avoids dislocations in P&L or equity that result from differences in the classification or measurement of the hedged item and the hedging instrument. Otherwise, derivatives are always measured at fair value through P&L.

Under IFRS 9, hedge accounting requirements have been amended in different areas to better reflect common practices in risk management. In general, hedge accounting rules have become more principles based and less complex compared to IAS 39.

### Testing hedge effectiveness

Under the new provisions, the restrictive 80-125% quantitative threshold for testing the effectiveness of a hedging relationship has been removed. This requirement has prevented many economic hedging relationships from qualifying for hedge accounting under IAS 39. Under IFRS 9, the effectiveness of a hedging relationship is assessed in a more principle-based way. For example, one requirement is that there is an economic relationship between the hedging instrument and the hedged item without stipulating any quantitative requirement. However, IFRS 9 still requires accounting for any hedge ineffectiveness in P&L (or OCI for those instruments measured at fair value through OCI). For example, an economic hedging relationship with a hedge effectiveness of 75% may now be recognised under IFRS 9

but the 25% ineffective part is still directly recognised in P&L or OCI. Under IAS 39, this hedging relationship would not be recognised at all since it does not comply with the 80-125% quantitative threshold.

### Accounting for hedging costs

IFRS 9 allows to recognise certain sources of hedge ineffectiveness as the costs of hedging which can be deferred in OCI before being recycled through P&L. For example, an option can be separated into its intrinsic value and its time value with the intrinsic part being designated as the hedge instrument and the time value being recognised as the costs of hedging. In this way, a purchased put option is viewed as a kind of insurance cover with the time value being the associated costs. Changes in the time value are recognised in OCI and are recycled to the P&L over the period of the hedge if the hedge is time related. If the hedge is transaction-related, recycling takes place when the hedged transaction affects P&L. Under IAS 39, changes in the time value were directly recognised in P&L resulting in additional P&L volatility. Another example includes the separation of a forward instrument in a spot component and a forward points component (e.g. the interest rate differential in a FX forward). In the same way as for options, the insurer can designate the spot component as the hedging instrument and recognise the forward points component as the cost of hedging. Changes in the fair value of the forward points are recognised in OCI and the fair value of the forward points on the initial recognition of the forward contract is amortised over the term of the hedging relationship.

### Adjusting hedge relationships

IFRS 9 introduces the concept of 'rebalancing'. Rebalancing refers to adjustments made to a hedge relationship for the purpose of maintaining a hedge ratio that complies with the hedge effectiveness requirements. Therefore, rebalancing allows responding to changes in the relationship between the hedge instrument and the hedged item by adjusting the designated quantities of either the hedge instrument or the hedged item without discontinuing the hedge relationship. Adjusting the hedge ratio might be required if the relationship/correlation between the hedged item and hedge instrument has changed due to structural changes. For example, assume an insurer with US dollar (USD) as the functional currency want to hedge the foreign currency exposure resulting from its investments in bonds denominated in Danish krone (DKK) using FX forwards. DKK is pegged to EUR. Due to higher liquidity of EUR/USD forward contracts, the insurer chooses to use EUR/USD forwards instead of DKK/USD forwards to hedge its DKK exposure. Now assume that Denmark decides to substantially re-calibrate the peg ratio of DKK to EUR. In this case, the original hedge ratio will no longer reflect the

relationship between the hedged item and the hedge instrument. Therefore, the insurer will have to rebalance the hedge ratio to retain a high hedge effectiveness. Under IAS 39, such changes to the hedge ratio were only possible by de-recognising the hedge relationship and establishing a new one, with 100% of the hedge market-to-market going through P&L. With the concept of rebalancing, only the ineffective part will go through P&L.

---

**For further information please contact:**

**Marlon Rockenfeller**

**Head of Insurance Strategy & Advisory, EMEA & APAC**

E-mail: [marlon.rockenfeller@dws.com](mailto:marlon.rockenfeller@dws.com)

Phone: +49 (69) 910-48725

**Thomas Gillmann**

**Insurance Strategy & Advisory, EMEA & APAC**

E-mail: [thomas.gillmann@dws.com](mailto:thomas.gillmann@dws.com)

Phone: +49 (69) 910-36311

**For investors in EMEA**

This marketing communication is intended for professional clients only.

**Important Information**

DWS is the brand name under which DWS Group GmbH & Co. KGaA and its subsidiaries operate their business activities. Clients will be provided DWS products or services by one or more legal entities that will be identified to clients pursuant to the contracts, agreements, offering materials or other documentation relevant to such products or services.

The information contained in this document does not constitute investment advice.

All statements of opinion reflect the current assessment of DWS International GmbH and are subject to change without notice.

Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, opinions and hypothetical performance analysis, therefore actual results may vary, perhaps materially, from the results contained here.

Past performance, actual or simulated, is not a reliable indication of future performance.

The information contained in this document does not constitute a financial analysis but qualifies as marketing communication. This marketing communication is neither subject to all legal provisions ensuring the impartiality of financial analysis nor to any prohibition on trading prior to the publication of financial analyses.

DWS International GmbH. As of: 07.05.2019

**FOR PROFESSIONAL CLIENTS ONLY**

Issued and approved by DWS International GmbH, Mainzer Landstraße 11-17, 60329 Frankfurt am Main, Germany, authorised and regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht ("BaFin").

© DWS International GmbH 2019. All rights reserved.

**For investors in APAC**

DWS is the brand name of DWS Group GmbH & Co. KGaA. The respective legal entities offering products or services under the DWS brand are specified in the respective contracts, sales materials and other product information documents. DWS Group GmbH & Co. KGaA, its affiliated companies and its officers and employees (collectively "DWS Group") are communicating this document in good faith and on the following basis.

This document has been prepared without consideration of the investment needs, objectives or financial circumstances of any investor. Before making an investment decision, investors need to consider, with or without the assistance of an investment adviser, whether the investments and strategies described or provided by DWS Group, are appropriate, in light of their particular investment needs, objectives and financial circumstances. Furthermore, this document is for information/discussion purposes only and does not constitute an offer, recommendation or solicitation to conclude a transaction and should not be treated as giving investment advice.

DWS Group does not give tax or legal advice. Investors should seek advice from their own tax experts and lawyers, in considering investments and strategies suggested by DWS Group. Investments with DWS Group are not guaranteed, unless specified.

Investments are subject to various risks, including market fluctuations, regulatory change, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you might not get back the amount originally invested at any point in time. Furthermore, substantial fluctuations of the value of the investment are possible even over short periods of time. The terms of any investment will be exclusively subject to the detailed provisions, including risk considerations, contained in the offering documents. When making an investment decision, you should rely on the final documentation relating to the transaction and not the summary contained herein. Past performance is no guarantee of current or future performance. Nothing contained herein shall constitute any representation or warranty as to future performance.

Although the information herein has been obtained from sources believed to be reliable, DWS Group does not guarantee its accuracy, completeness or fairness. No liability for any error or omission is accepted by DWS Group. Opinions and estimates may be changed without notice and involve a number of assumptions which may not prove valid. All third party data (such as MSCI, S&P, Dow Jones, FTSE, Bank of America Merrill Lynch, Factset & Bloomberg) are copyrighted by and proprietary to the provider. DWS Group or persons associated with it may (i) maintain a long or short position in securities referred to herein, or in related futures or options, and (ii) purchase or sell, make a market in, or engage in any other transaction involving such securities, and earn brokerage or other compensation.

The document was not produced, reviewed or edited by any research department within DWS Group and is not investment research. Therefore, laws and regulations relating to investment research do not apply to it. Any opinions expressed herein may differ from the opinions expressed by other DWS Group departments including research departments. This document may contain forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. The forward looking statements expressed constitute the author's judgment as of the date of this material. Forward looking statements involve significant elements of subjective judgments and analyses and changes thereto and/or consideration of different or additional factors could have a material impact on the results indicated. Therefore, actual results may vary, perhaps materially, from the results contained herein. No representation or warranty is made by DWS Group as to the reasonableness or completeness of such forward looking statements or to any other financial information contained herein.

This document may not be reproduced or circulated without DWS Group's written authority. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries, including the United States.

This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS Group to any registration or licensing requirement within such jurisdiction not currently met within such jurisdiction. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions.

Unless notified to the contrary in a particular case, investment instruments are not insured by the Federal Deposit Insurance Corporation ("FDIC") or any other governmental entity, and are not guaranteed by or obligations of DWS Group.

In Hong Kong, this document is issued by DWS Investments Hong Kong Limited and the content of this document has not been reviewed by the Securities and Futures Commission.

© 2019 DWS Investments Hong Kong Limited

In Singapore, this document is issued by DWS Investments Singapore Limited and the content of this document has not been reviewed by the Monetary Authority of Singapore. © 2019 DWS Investments Singapore Limited

CRS 067375

**For investors in the U.S.**

For Institutional investor and Registered Representative use only. Not to be shared with the public.

The brand DWS represents DWS Group GmbH & Co. KGaA and any of its subsidiaries such as DWS Distributors, Inc. which offers investment products or Deutsche Investment Management Americas Inc. and RREEF America L.L.C. which offer advisory services.

The material was prepared without regard to the specific objectives, financial situation or needs of any particular person who may receive it. It is intended for informational purposes only and it is not intended that it be relied on to make any investment decision. It is for professional investors only. It does not constitute investment advice or a recommendation or an offer or solicitation and is not the basis for any contract to purchase or sell any security or other instrument, or for Deutsche Bank AG and its affiliates to enter into or arrange any type of transaction as a consequence of any information contained herein.

Please note that this information is not intended to provide tax or legal advice and should not be relied upon as such. DWS does not provide tax, legal or accounting advice. Please consult with your respective experts before making investment decisions.

Neither DWS nor any of its affiliates, gives any warranty as to the accuracy, reliability or completeness of information which is contained. Except insofar as liability under any statute cannot be excluded, no member of DWS, the Issuer or any officer, employee or associate of them accepts any liability (whether arising in contract, in tort or negligence or otherwise) for any error or omission or for any resulting loss or damage whether direct, indirect, consequential or otherwise suffered.

This document is intended for discussion purposes only and does not create any legally binding obligations on the part of DWS and/or its affiliates. Without limitation, this document does not constitute investment advice or a recommendation or an offer or solicitation and is not the basis for any contract to purchase or sell any security or other instrument, or for DWS to enter into or arrange any type of transaction as a consequence of any information contained herein. The information contained in this document is based on material we believe to be reliable; however, we do not represent that it is accurate, current, complete, or error free. Assumptions, estimates and opinions contained in this document constitute our judgment as of the date of the document and are subject to change without notice. Past performance is not a guarantee of future results. Any forecasts provided herein are based upon our opinion of the market as at this date and are subject to change, dependent on future changes in the market. Any prediction, projection or forecast on the economy, stock market, bond market or the economic trends of the markets is not necessarily indicative of the future or likely performance. Investments are subject to risks, including possible loss of principal amount invested.

Certain DWS products and services may not be available in every region or country for legal or other reasons, and information about these products or services is not directed to those investors residing or located in any such region or country.

The material was prepared without regard to the specific objectives, financial situation or needs of any particular person who may receive it. It is intended for informational purposes only and it is not intended that it be relied on to make any investment decision. It is for professional investors only. It does not constitute investment advice or a recommendation or an offer or solicitation and is not the basis for any contract to purchase or sell any security or other instrument, or for DWS and its affiliates to enter into or arrange any type of transaction as a consequence of any information contained herein. Investment decisions should always be based on the Sales Prospectus, supplemented in each case by the most recent audited annual report and, in addition, by the most recent half-year report, if this report is more recent than the most recently available annual report.

Past performance is not indicative of future results. No representation or warranty is made as to the efficacy of any particular strategy or the actual returns that may be achieved.

For investors in Bermuda: This is not an offering of securities or interests in any product. Such securities may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation. investors in Peru: The Products may not be offered or sold to the public in Peru. Accordingly, the Products have not been nor will they be registered with the Peruvian Superintendence of Capital Markets – Public Registry of the Capital Markets- nor have they been submitted to the foregoing agency for approval. Documents relating to the Products, as well as the information contained therein, may not be supplied to the public in Peru, as the offering of the Products is not a public offering of securities in Peru, and may not be used in connection with any offer for subscription or sale of securities to the public in Peru.