



CDX.NA.IG.32

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| Reference Obligations Being Replaced | 9 |
| Reference Entities Being Updated | 2 |
| New Reference Entity and Obligation Being Added | 2 |
| Unchanged Reference Entities and Obligations | 112 |

| Removed Entities | |
|-------------------|--|
| Aetna Inc. | |
| XEROX CORPORATION | |

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Reference Obligations Being Replaced: 9

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| Currently in Index | | | | | | Expected replacements | | | | | |
|--------------------|--------------------------------|----------------------------|--------------|--------|--|-----------------------|--------------|--------|--|--|--|
| Market Ticker | Reference Entity | Instrument Name | ISIN | Tier | | Instrument Name | ISIN | Tier | | | |
| AMGN | Amgen Inc. | AMGN 2.225May19 | US031162BLJ6 | SNRFOR | | AMGN 3.925 22May24 | US031162BV19 | SNRFOR | | | |
| APC | ANADARKO PETROLEUM CORPORATION | APC 8.95 15Jun19 | US032511BF31 | SNRFOR | | APC 5.55 15Mar26 | US032511BN84 | SNRFOR | | | |
| BSX | Boston Scientific Corporation | BSX 6 15Jun20 | US101137AK32 | SNRFOR | | BSX 3.45 01Mar24 | US101137AV98 | SNRFOR | | | |
| CMCSA | Comcast Corporation | CMCSA 5.7 01Jul19 BondCall | US20393AAZ42 | SNRFOR | | CMCSA 3.7 15Apr24 | US20393AR308 | SNRFOR | | | |
| EACACN | ENCANA CORPORATION | EACACN 6.5 15May19 | US292505AH79 | SNRFOR | | EACACN 3.9 15Nov21 | US292505BA36 | SNRFOR | | | |
| KSS | Kohls Corporation | KSS 4 01Nov21 | US000256AR59 | SNRFOR | | KSS 4.25 17Jul25 | US000256AU88 | SNRFOR | | | |
| PRU | Prudential Financial, Inc. | PRU 3.75 15Jun19 | US1443028G91 | SNRFOR | | PRU 3.5 15Mar24 | US1443028Z72 | SNRFOR | | | |
| R | Ryder System, Inc. | R 2.55 01Jan19 | US178355HW07 | SNRFOR | | R 3.875 01Dec23 | US178355HK40 | SNRFOR | | | |
| VRZN | Verizon Communications Inc. | VRZN 2.55 17Jun19 | US92343VCB80 | SNRFOR | | VRZN 4.125 16Mar27 | US92343VDD74 | SNRFOR | | | |

Reference Entities Being Updated: 2

The index constituents listed below have gone through a corporate action or credit event.

| Currently in Index | | | | | | Expected replacements | | | | | |
|--------------------|--------------------------------|--------------------------|--------------|--------|--|-----------------------|---------------------------------|-----------------------|--------------|--------|--|
| Market Ticker | Name | Instrument Name | ISIN | Tier | | New Market Ticker | New Market Name | Instrument Name | ISIN | Tier | |
| ANDEAVAA | Andavor | ANDEAVAA 4.5 7.5 15Dec23 | US03348MAC81 | SNRFOR | | MARAPET | Marathon Petroleum Corporation | MARAPET 3.625 15Sep24 | US66585AAG76 | SNRFOR | |
| ENERTRAB | Energy Transfer Partners, L.P. | ENERTRAB 4.15 01Oct20 | US29273RAX70 | SNRFOR | | ENERTRAD | ENERGY TRANSFER OPERATING, L.P. | ENERTRAD 4.15 01Oct20 | US29273RAX70 | SNRFOR | |

New Reference Entity and Obligation Being Added: 2

Below is the new entity being added to this index, along with the relevant reference obligation.

| Currently in Index | | | | |
|--------------------|------------------------|--------------------|--------------|--------|
| Market Ticker | Name | Instrument Name | ISIN | Tier |
| CSCO | Cisco Systems, Inc. | CSCO 3.625 04Mar24 | US17275RAN26 | SNRFOR |
| TECKRS | Teck Resources Limited | TECKRS 8.5 01Jun24 | US87674ZBC80 | SNRFOR |

Unchanged Reference Entities and Obligations: 112

The index constituents and their associated reference obligation listed below are expected to remain unchanged

| Currently in Index | | | | |
|--------------------|--|-----------------------------|--------------|--------|
| Market Ticker | Market Name | Instrument Name | ISIN | Tier |
| STCENT | 21st Century Fox America, Inc. | STCENT (2) 3.7 15Sep24 | US90131HA533 | SNRFOR |
| AEP | AMERICAN ELECTRIC POWER COMPANY, INC. | AEP 2.95 15Dec22 | US025557AG68 | SNRFOR |
| AXP | American Express Company | AXP (4) 2.65 02Dec22 | US025816BD05 | SNRFOR |
| AUS | American International Group, Inc. | AUS 6.85 01Mar26 | US026874AZ07 | SNRFOR |
| APA | APACHE CORPORATION | APA 3.25 15Apr22 | US037411AZ87 | SNRFOR |
| ARW | ARROW ELECTRONICS, INC. | ARW 6 01Apr20 | US042735BA76 | SNRFOR |
| EXSBB-AGM | ASSURED GUARANTY MUNICIPAL CORP. | | | |
| ATTINC | AT&T Inc. | ATTINC 2.45 30Jun20 | US0020BRCL42 | SNRFOR |
| AZO | AutoZone, Inc. | AZO 2.5 15Apr21 | US033332AZ14 | SNRFOR |
| AUT | Autoliv, Inc. | AUT 4.875 01Dec22 | US025620AR65 | SNRFOR |
| ABX | BARRICK GOLD CORPORATION | ABX 5.8 15Nov24 | US067901AA64 | SNRFOR |
| BAX | Baxter International Inc. | BAX 1.7 15Aug21 | US071813BR97 | SNRFOR |
| BRK | Berkshire Hathaway Inc. | BRK 2.75 15Mar23 | US084670BR84 | SNRFOR |
| BBY | Best Buy Co., Inc. | BBY 5.5 15Mar21 | US0516651E50 | SNRFOR |
| HRB-Fic | Black Financial LLC | HRB-Fic 5.5 01Nov22 Stuc | US093662AE40 | SNRFOR |
| BMY | Bristol-Myers Squibb Company | BMY 6.8 15Nov26 | US110122AB49 | SNRFOR |
| CPB | CARBELL SCOUR COMPANY | CPB 4.25 15Apr21 | US144238AW93 | SNRFOR |
| CNATUR | CANADIAN NATURAL RESOURCES LIMITED | CNATUR 3.45 15Nov21 | US13635EAR22 | SNRFOR |
| COF-BNKA | Capital One Bank (USA), National Association | COF-BNKA 2.3 05Jun19 | US140420KN23 | SNRFOR |
| CAH | Cardinal Health, Inc. | CAH 4.625 15Dec20 | US141489AT85 | SNRFOR |
| CCL | CARNIVAL CORPORATION | CCL 6.68 15Apr29 | US143884K433 | SNRFOR |
| CAT | Caterpillar Inc. | CAT 3.9 27May21 | US149123BV25 | SNRFOR |
| CBSCOR | CBS Corporation | CBSCOR 4.3 15Feb22 | US124857AE30 | SNRFOR |
| CHUBLM | Chubb Limited | CHUBLM 8.875 15Apr29 | US0040EAC112 | SNRFOR |
| CONABRA | Conagra Brands, Inc. | CONABRA 7 01Oct28 | US205887AR36 | SNRFOR |
| COP | ConocoPhillips | COP (3) 8.9 15Oct20 | US20825CAF14 | SNRFOR |
| COX-Commnc | Cox Communications, Inc. | COX-Commnc 6.8 01Aug28 | US234444AN23 | SNRFOR |
| CSX | CSX Corporation | CSX 3.7 01Nov23 | US126406ZD24 | SNRFOR |
| CVSHEA | CVS Health Corporation | CVSHEA 2.125 01Jun21 | US128600C150 | SNRFOR |
| DHI | D.R. Horton, Inc. | DHI 4.75 15Feb23 | US03311AB031 | SNRFOR |
| DRI | Darden Restaurants, Inc. | DRI 3.85 01May21 | US237194AL50 | SNRFOR |
| DE | Deere & Company | DE 4.375 15Oct19 | US2441998C83 | SNRFOR |
| DVN | Devon Energy Corporation | DVN 7.95 15Apr22 | US251799AA02 | SNRFOR |
| DOMINEN | Domini Energy, Inc. | DOMINEN 2.75 15Apr22 | US574618RW33 | SNRFOR |
| DOMC | Domini Corporation | DOMC 4.4 01Apr22 | US257599AH77 | SNRFOR |
| DUKECO | Duke Energy Carolinas, LLC | DUKECO 6.1 01Jun37 | US94424CAZ27 | SNRFOR |
| DUCTEC | DUCTEC TECHNOLOGY COMPANY | DUCTEC 4.45 18Sep22 | US233551AA41 | SNRFOR |
| DD | E. I. du Pont de Nemours and Company | DD 2.8 15Feb23 | US263340CK37 | SNRFOR |
| EMN | Eastman Chemical Company | EMN 7.6 01Feb27 | US277432AD23 | SNRFOR |
| ENB | Enbridge | ENB 3.5 10Jun24 | US29269AH989 | SNRFOR |
| ER-ERPOperLP | ERF Operating Limited Partnership | ER-ERPOperLP 4.625 15Dec21 | US26854AZ66 | SNRFOR |
| EXC | Exxon Corporation | EXC 5.15 01Dec20 | US210371AL43 | SNRFOR |
| EXPEGR0 | Expedia Group, Inc. | EXPEGR0 4.35 15Aug24 | US30212P4J49 | SNRFOR |
| F | Fidelity Corp. | F 7.2 075 15Nov21 | US373324ZL13 | SNRFOR |
| F | Ford Motor Company | F 4.346 08Dec26 | US345370CR99 | SNRFOR |
| GE | General Electric Company | GE 2.7 09Oct22 | US396040BD45 | SNRFOR |
| GIS | General Mills, Inc. | GIS 3.15 15Dec21 | US070334BM66 | SNRFOR |
| GENMCO | General Motors Company | GENMCO (2) 4.875 02Oct23 | US37045VAE02 | SNRFOR |
| HAL | HALLIBURTON COMPANY | HAL-Envsves 8.75 15Feb21 | US406216AH42 | SNRFOR |
| HESB | Hess Corporation | HESB 3.5 15Jul24 | US42809AF471 | SNRFOR |
| HON | Honeywell International Inc. | HON 5.7 15Mar26 BondCall | US438516AR73 | SNRFOR |
| HOSHOT-HSTRES | Hoot Hotels & Resorts, L.P. | HOSHOT-HSTRES 4.75 01Mar23 | US441077AT34 | SNRFOR |
| HPINC | HP Inc. | HPINC 4.625 09Dec21 | US482368V433 | SNRFOR |
| IRN | Interco-Brand Company | IRN 9 15Apr21 | US468968AZ74 | SNRFOR |
| IBM | International Business Machines Corporation | IBM 1.625 15May20 | US459200HM60 | SNRFOR |
| AIG-intl.easFn | INTERNATIONAL LEASE FINANCE CORPORATION | AIG-intl.easFn 8 25 15Dec20 | US4957450F62 | SNRFOR |
| IP | INTERNATIONAL PAPER COMPANY | IP 7.5 15Apr21 | US460146E211 | SNRFOR |
| JNJ | Johnson & Johnson | JNJ 1.65 01Mar21 | US478160BS27 | SNRFOR |
| JOHCON | JOHNSON CONTROLS INTERNATIONAL PUBLIC LIMITED COMPANY | JOHCON 6 30Mar20 | US478375AD00 | SNRFOR |
| KINDERM | Kinder Morgan, Inc. | KINDERM 3.05 01Dec19 | US494568AE11 | SNRFOR |
| KRAFHEI | Kraft Heinz Foods Company | KRAFHEI 8.375 15Jul28 | US423074AF08 | SNRFOR |
| LNC | Lincoln National Corporation | LNC 6.25 15Feb20 | US534187AY52 | SNRFOR |
| LMT | Lockheed Martin Corporation | LMT 4.25 15Nov19 | US539634AT67 | SNRFOR |
| LTR | Lowe's Corporation | LTR 0 01Feb25 | US54024AP38 | SNRFOR |
| LOW | Lowe's Companies, Inc. | LOW 4.625 15Apr20 | US548661CQ89 | SNRFOR |
| M | Macy's, Inc. | M 3.45 15Jun21 | US5916XAN75 | SNRFOR |
| MAR | MARSHALL TOWN INTERNATIONAL, INC. | MAR 2.3 15Apr22 | US57183AR49 | SNRFOR |
| MMS | MARSH & MCLENNAN COMPANIES, INC. | MMS 5.875 01Aug33 | US571748AK86 | SNRFOR |
| MCD | MCDONALD'S CORPORATION | MCD 2.75 09Dec20 | US68013MEX83 | SNRFOR |
| MCK | McKesson Corporation | MCK 7.65 01Mar27 | US61857AMF95 | SNRFOR |
| MET | MetaLife, Inc. | MET 4.75 08Feb21 | US59156RAV61 | SNRFOR |
| MONDINT | Mondelez International, Inc. | MONDINT 4 01Feb24 | US609207AB14 | SNRFOR |
| MOTSOL | Monsie Solutions, Inc. | MOTSOL 7 15May25 | US626076AH21 | SNRFOR |
| NRUC | National Rural Utilities Cooperative Finance Corporation | NRUC 9 01Mar20 | US63743CZT02 | SNRFOR |
| NEWBERRA | Newell Brands Inc. | NEWBERRA 3.85 01Apr23 | US651229AV81 | SNRFOR |
| NEM | Newmont Mining Corporation | NEM 5.875 01Apr35 | US651639AE60 | SNRFOR |
| NFN | Netflix, Inc. | NFN 9.95 15Mar29 | US656844H333 | SNRFOR |
| NSC | NORFOLK SOUTHERN CORPORATION | NSC 3.25 01Dec21 | US655844GB28 | SNRFOR |
| NORGRM | Northrop Grumman Corporation | NOR-Grum (3) 7.75 15Feb21 | US666807AW21 | SNRFOR |
| OMC | Omnicom Group Inc. | OMC 4.45 15Aug20 | US682134AC59 | SNRFOR |
| PACKAM | Packaging Corporation of America | PACKAM 3.9 15Jun22 | US695156AP42 | SNRFOR |
| PFE | Pfizer Inc. | PFE 2.2 15Dec21 | US717081DZ31 | SNRFOR |
| DSX | Quest Diagnostics Incorporated | DSX 2.5 30Mar20 | US74634LAW90 | SNRFOR |
| RTN | Rathjen Company | RTN 2.15 15Apr27 | US755111AF81 | SNRFOR |
| RAI | Reynolds American Inc. | RAI 4.85 15Sep23 | US761713AY21 | SNRFOR |
| RCL | ROYAL CARIBBEAN CRUISES LTD. | RCL 6.25 15Nov22 | US780153AL93 | SNRFOR |
| SRE | Sealed Air Corporation | SRE 4.05 01Dec23 | US716881AL77 | SNRFOR |
| SPG-LP | Simon Property Group, L.P. | SPG-LP 4.375 01Mar21 | US828807CF26 | SNRFOR |
| LUV | Southwest Airlines Co. | LUV 2.85 09Nov20 | US844741BB35 | SNRFOR |
| TGT | Target Corporation | TGT 3.875 15Jul20 | US876126AV83 | SNRFOR |
| ALL | The Allstate Corporation | ALL 3.15 15Jun23 | US02002AZ47 | SNRFOR |
| BA | THE BOEING COMPANY | BA 8.75 15Apr21 | US097023AD79 | SNRFOR |
| DOW | Dow Chemical Company | DOW 7 375 01Nov29 | US2654851E10 | SNRFOR |
| HIG | THE HARTFORD FINANCIAL SERVICES GROUP, INC. | HIG 5.125 15Apr22 | US416518AB42 | SNRFOR |
| HD | The Home Depot, Inc. | HD 5.875 16Dec36 BondCall | US43706AS19 | SNRFOR |
| KR | THE KROGER CO. | KR 6.15 15Jul20 | US801044CH20 | SNRFOR |
| PS | The Procter & Gamble Company | PS 3.1 15Apr23 | US742116EB11 | SNRFOR |
| SHW | The Sherwin-Williams Company | SHW 3.75 01Feb27 | US824348AL09 | SNRFOR |
| DIS | The Walt Disney Company | DIS 2.55 15Feb22 | US254868CT12 | SNRFOR |
| WMB | THE WILLIAMS COMPANIES, INC. | WMB 4.5 24 Jun24 | US869478BV99 | SNRFOR |
| TSN | Tyson Foods, Inc. | TSN 4.5 15Jul22 | US92494AT07 | SNRFOR |
| UNP | Union Pacific Corporation | UNP 6.625 01Feb29 | US907818CF33 | SNRFOR |
| UPS | United Parcel Service, Inc. | UPS-Americans 3.375 01Apr30 | US911368AB04 | SNRFOR |
| UNH | UnitedHealth Group Incorporated | UNH 3.35 15Jul22 | US91324PCN06 | SNRFOR |
| VLOC | Valeo Energy Corporation | VLOC 8.75 15Jun30 | US91913VAB65 | SNRFOR |
| VAIC | Vaicom Inc. | VAIC 6.8 75 30Apr26 Stuc | US925204AA89 | SNRFOR |
| WALMART | WALMART INC. | WALMART 5.875 05Apr27 | US931142ZC96 | SNRFOR |
| WESTMNV | WESTMNV 7.85 15Feb31 | WESTMNV 7.85 15Feb31 | US961548AY02 | SNRFOR |
| WY | Weyerhaeuser Company | WY 7 125 15Jul23 | US962166AS33 | SNRFOR |
| WHR | WHR 4.85 15Jun21 | WHR 4.85 15Jun21 | US98330HCB96 | SNRFOR |
| XLT LTD | XLT LTD | XLT LTD 6.25 15May27 | US98372PAK49 | SNRFOR |