



CDX-NA-IG-39	Reference Obligations Being Replaced	10
	Reference Entities Being Updated	0
	New Reference Entity and Obligation Being Added	4
	Unchanged Reference Entities and Obligations	111

Removed Entities
THE HARTY ORD FINANCIAL SERVICES GROUP INC
Duke Energy Carolinas, LLC
ESF Operating Limited Partnership
Pioneer Natural Resources Company

**CDX-NA-IG-39**  
Reference Obligations Being Replaced: 10  
Reference obligations for the index constituents listed below are no longer suitable for inclusion.  
Replacement reference obligations have been identified and are listed below.

IHS Market Ticker	Reference Entity	Currently in Index	Instrument Name	ISIN	Tier	Instrument Name	Expected Replacements	ISIN	Tier
AMP	AMERICAN ELECTRIC POWER COMPANY, INC.	AMP 2.25 15Apr25	US0265195822	US0265195822	SNRF0R	AMP 3.2 15Apr27	US0265195828	US0265195828	SNRF0R
AMP	American Express Company	AMP (4) 2.65 02Dec22	US0248168025	US0248168025	SNRF0R	AMP 4.05 03May29	US0248168031	US0248168031	SNRF0R
AVY	Avnet, Inc.	AVY 4.875 03Dec22	US02381745X4	US02381745X4	SNRF0R	AVY 5.15 15Apr21	US02381745X5	US02381745X5	SNRF0R
BIRK	Baker Hughes Services Corporation	BIRK 2.75 15Mar23	US08467088R4	US08467088R4	SNRF0R	BIRK 3.125 15Mar26	US08467088R7	US08467088R7	SNRF0R
BFB	Bank Financial LLC	BFB 3.5 01Mar22	US0938264640	US0938264640	SNRF0R	BFB 3.5 15Apr26	US0938264643	US0938264643	SNRF0R
CH	Chubb	CH 4.75 15Apr22	US2333148C11	US2333148C11	SNRF0R	CH 4.15 15Apr22	US2333148P20	US2333148P20	SNRF0R
EXPG	Expedia Group, Inc.	EXPG 4.5 15Apr24	US302127PA49	US302127PA49	SNRF0R	EXPG 6.25 01May25	US302127PA58	US302127PA58	SNRF0R
GE	General Electric Company	GE 2.7 09Oct22	US3096548D41	US3096548D41	SNRF0R	GE 6.75 15Mar27	US3096548Z26	US3096548Z26	SNRF0R
JNJ	Johnson & Johnson	JNJ 2.05 01Mar23	US478160B100	US478160B100	SNRF0R	JNJ 2.9 15Jan20	US478160C831	US478160C831	SNRF0R
TOL	Toll Brothers, Inc.	TOL 4.5 03Apr 23 15Apr23	US884761A024	US884761A024	SNRF0R	TOL 4.5 03Apr 23 15Apr23	US884761A173	US884761A173	SNRF0R

**Reference Entities Being Updated: 0**  
The index constituents listed below have gone through a corporate action or credit event.

IHS Market Ticker	Reference Entity	Currently in Index	Instrument Name	ISIN	Tier	New IHS Market Ticker	New Reference Entity	Expected Replacements	Instrument Name	ISIN	Tier

**New Reference Entity and Obligation Being Added: 4**  
Below is the new entity being added to this index, along with the relevant reference obligation.

IHS Market Ticker	Reference Entity	Instrument Name	ISIN	Tier
FI	FirstEnergy Corp.	FE 7.375 15Nov21	US33702AC13	SNRF0R
HCA	HCA Inc.	HCA 5.875 15Feb20	US404119B574	SNRF0R
TRIP	Travel Resources Partners LP	TRIP 6.75 01Mar20	US1707380A21	SNRF0R
DT	T-Mobile USA, Inc.	DT 1.000000 4.75 01Feb20	US87204AAV70	SNRF0R

**Unchanged Reference Entities and Obligations: 111**  
The index constituents and their associated reference obligation listed below are expected to remain unchanged.

IHS Market Ticker	Reference Entity	Instrument Name	ISIN	Tier
ADV	ADVANCED MICRO DEVICES, INC.	ADV 2.125 01Sep20	US027082B030	SNRF0R
ALTY	Ally Financial Inc.	ALTY 5.875 01Mar25	US020088B181	SNRF0R
AM	American International Group, Inc.	AM 8.25 01May20	US02874A2077	SNRF0R
AMN	American Airlines Group Inc.	AMN 6.625 28Mar24	US021162A049	SNRF0R
ARW	ARW 7.5 15Jan27	ARW 7.5 15Jan27	US042736AX37	SNRF0R
ASBB-AGM	ASSURED GUARANTY MUNICIPAL CORP.	ASBB 3.8 15Apr27	US02008RH051	SNRF0R
ATINC	Autzone, Inc.	ATINC 3.125 21Apr26	US02332A1706	SNRF0R
BAC	Bank of America Corporation	BAC 4.8 15Mar24	US054303AA44	SNRF0R
BAX	Baxter International Inc.	BAX 2.6 15Apr26	US07181MB15	SNRF0R
BBY	Best Buy Co., Inc.	BBY 4.45 01Oct22	US08620AA270	SNRF0R
BWA	Boston Waterworks Inc.	BWA 3.375 15Apr25	US09974AA053	SNRF0R
BSX	Boston Scientific Corporation	BSX 3.45 01Mar24	US10117AV066	SNRF0R
BWAY	BWAY Energy Services Company	BWAY 6.8 15Mar28	US10120AB049	SNRF0R
CPB	CAMPBELL SOUP COMPANY	CPB 4.15 15Mar28	US134429BC35	SNRF0R
CHNR	CANADIAN NATURAL RESOURCES LIMITED	CHNR 2.05 15Jun25	US13638AA248	SNRF0R
COF	Capital One Bank USA, National Association	COF 3.875 28Apr20	US144841C123	SNRF0R
CAH	Cardinal Health, Inc.	CAH 3.41 15Jun27	US14149VB184	SNRF0R
CAT	Caterpillar Inc.	CAT 2.6 08Mar29	US18412CG461	SNRF0R
CHUBB	Chubb Limited	CHUBB 3.875 15Apr29	US0440EAC12	SNRF0R
CLIC	Clorox Company	CLIC 3.65 01Oct24	US127080A060	SNRF0R
CSX	CSX Corporation	CSX 3.1 15Apr26	US020088B181	SNRF0R
CONR	Conagra Brands, Inc.	CONR 7.01Oct28	US02887AC936	SNRF0R
COX	COX COMMUNICATIONS INC	COX 3.1 10Oct22	US02887AC936	SNRF0R
COX	Cox Communications, Inc.	COX 3.875 01Apr28	US02887AC936	SNRF0R
CVS	CVS Health Corporation	CVS 2.8 01Mar28	US02887AC936	SNRF0R
CVSHEA	CVS Health Corporation	CVSHEA 2.625 15Apr24	US12650DE172	SNRF0R
DHR	Danaher Corporation	DHR 3.35 15Apr20	US23351A2011	SNRF0R
DRI	Darden Restaurants, Inc.	DRI 3.85 01Apr27	US02371AA100	SNRF0R
DE	Deere & Company	DE 3.375 16Oct29	US044198R026	SNRF0R
DELL	Dell Technologies Inc.	DELL 3.75 15Apr28	US047254A033	SNRF0R
DVN	Devon Energy Corporation	DVN 7.95 15Apr27	US025178AA02	SNRF0R
DOMIN	Dominion Energy, Inc.	DOMIN 4.25 01Jun28	US025746UC78	SNRF0R
DOX	DOX TECHNOLOGY COMPANY	DOX 1.8 15Apr26	US02350AA039	SNRF0R
DD	DuPont de Nemours and Company	DD 1.7 15Apr25	US028934CN75	SNRF0R
EMR	Eastman Chemical Company	EMR 7.6 01Feb23	US027432D013	SNRF0R
ENB	Enbridge Inc.	ENB 3.8 15Apr24	US28250AH489	SNRF0R
ENERTR	ENERTRAC ENERGY TRADER LP	ENERTR 0.15 075 15Jan24	US02678AA060	SNRF0R
ENR	Enbridge Energy Services Inc.	ENR 3.4 15Apr26	US02678AA060	SNRF0R
FDX	FedEx Corporation	FDX 3.125 21Apr26	US142498B274	SNRF0R
FREEM	Freemont Energy Inc.	FREEM 3.1 01Apr27	US18412CG461	SNRF0R
GIS	General Mills, Inc.	GIS 4.17Apr26	US03703ACF96	SNRF0R
GENC	General Motors Company	GENC 2.6 01Oct23	US027080A060	SNRF0R
HAL	HALLIBURTON COMPANY	HAL 2.6 01Mar26	US02678AA060	SNRF0R
HES	Hess Corporation	HES 3.3 15Apr24	US02808HAF47	SNRF0R
HON	Honeywell International Inc.	HON 3.7 15Mar26 BondCall	US0248168025	SNRF0R
HOT	Host Hotels & Resorts, LP	HOT 3.875 01Apr24	US44107FAX46	SNRF0R
HP	HP Inc.	HP 3.25 15Apr24	US027080A060	SNRF0R
IBM	International Business Machines Corporation	IBM 3.625 12Feb24	US45020H1885	SNRF0R
IP	INTERNATIONAL PAPER CORP.	IP 3.15 15Apr26	US041842C017	SNRF0R
IPC	INTERNATIONAL PAPER CORP.	IPC 3.15 15Apr26	US041842C017	SNRF0R
IR	Iron Mountain Inc.	IR 3.875 01Apr28	US041842C017	SNRF0R
KR	Kraft Heinz Foods Company	KRAF 6.375 15Apr28	US423074AF08	SNRF0R
LEN	Lennar Corporation	LEN 4.875 15Apr24	US020078W311	SNRF0R
LNC	Lincoln National Corporation	LNC 3.35 08Mar29	US024198B108	SNRF0R
LMT	Lockheed Martin Corporation	LMT 3.65 15Jan21	US038380B111	SNRF0R
LRI	Loews Corporation	LRI 6.0 01Feb25	US0440EAC12	SNRF0R
LOW	Lowes Companies, Inc.	LOW 2.15 15Apr26	US0486610M66	SNRF0R
M	M.D.C. Holdings, Inc.	M 3.85 15Apr21	US02678AA060	SNRF0R
MAR	Marathon Petroleum Corporation	MAR 3.125 15Apr26	US02678AA060	SNRF0R
MAR	MARSHALL & MCKENNA COMPANIES, INC.	MAR 3.125 15Apr26	US02678AA060	SNRF0R
MCD	McDonald's Corporation	MCD 3.01 01Apr27	US02887AC936	SNRF0R
MCK	McKesson Corporation	MCK 3.65 01Apr27	US02887AC936	SNRF0R
MET	MetLife, Inc.	MET 3.6 15Apr25	US02678AA060	SNRF0R
MOND	Mondelez International, Inc.	MOND 4.125 01May28	US02678AA060	SNRF0R
MOT	Motorola Solutions, Inc.	MOT 3.75 15Apr29	US02678AA060	SNRF0R
NRG	National Rural Utilities Cooperative Finance Corporation	NRG 8.0 01Apr27	US027432D013	SNRF0R
NRW	Norfolk Southern Corporation	NRW 2.9 01Oct20	US02678AA060	SNRF0R
NXTENG	Nextera Energy Capital Holdings, Inc.	NXTENG 1.875 15Apr27	US02678AA060	SNRF0R
NSC	NORFOLK SOUTHERN CORPORATION	NSC 3.65 01Apr25	US02678AA060	SNRF0R
NORCOR	Norfolk Southern Corporation	NORCOR 3.25 01Apr23	US02678AA060	SNRF0R
OMC	Omnicom Group Inc.	OMC 3.65 01Apr24	US02678AA060	SNRF0R
ORCL	Oracle Corporation	ORCL 3.25 15Apr27	US02678AA060	SNRF0R
OVN	Ovintiv Inc.	OVN 3.25 15Apr26	US02678AA060	SNRF0R
PAC	Packaging Corporation of America	PAC 3.1 15Apr26	US02678AA060	SNRF0R
PANW	Panorama Software Inc.	PANW 4.8 15Apr26	US02678AA060	SNRF0R
PFE	Pfizer Inc.	PFE 3.28 15Apr26	US171081EX73	SNRF0R
PFI	Puget Sound Financial, Inc.	PFI 3.875 01Apr23	US02678AA060	SNRF0R
PHM	PulteGroup, Inc.	PHM 3.875 15Jun22	US145867AM30	SNRF0R
QDEL	Quantum Diagnostics Incorporated	QDEL 4.2 15Apr29	US02678AA060	SNRF0R
QTEC	Raytheon Technologies Corporation	QTEC 3.125 15Apr27	US19171C8D5	SNRF0R
S	Syber Systems, Inc.	S 3.875 01Apr23	US02678AA060	SNRF0R
SEI	Sei Financial Group, Inc.	SEI 3.25 15Apr27	US02678AA060	SNRF0R
SPG	Simon Property Group, L.P.	SPG 2.75 01Jun23	US02678AA060	SNRF0R
STZ	Storied Brands Inc.	STZ 4.125 15Apr27	US02678AA060	SNRF0R
TGT	Target Corporation	TGT 2.5 15Apr26	US02678AA060	SNRF0R
TECK	Teck Resources Limited	TECK 6.125 01Oct25 BondCall	US027432D013	SNRF0R
TES	TESS Corporation	TES 1.1 15Apr29	US02678AA060	SNRF0R
ALL	The Allstate Corporation	ALL 3.15 15Apr25	US02678AA060	SNRF0R
BA	THE BAKING COMPANY	BA 2.6 30Oct26	US02678AA060	SNRF0R
DOW	The Dow Chemical Company	DOW 7.375 01Apr29	US02678AA060	SNRF0R
HD	The Home Depot, Inc.	HD 3.875 15Apr26	US02678AA060	SNRF0R
RS	THE ROYAL BANK OF CANADA	RS 4.8 15Apr26	US02678AA060	SNRF0R
PG	The Procter & Gamble Company	PG 3.1 15Apr23	US02678AA060	SNRF0R
SWW	The Southern Wine & Spirits Company	SWW 7.0 01Apr27	US02678AA060	SNRF0R
SO	THE SOUTHERN COMPANY	SO 3.25 01Jun26	US02678AA060	SNRF0R
THWLT	The Walt Disney Company	THWLT 3.7 15Apr24	US02678AA060	SNRF0R
THE	THE TRAVEL COMPANIES, INC.	THE 4.5 24Apr26	US02678AA060	SNRF0R
TRP	TRANSNORANDA PIPELINES LIMITED	TRP 4.875 15Apr26	US02678AA060	SNRF0R
TRV	Travelers Companies, Inc.	TRV 3.5 01Apr27	US02678AA060	SNRF0R
UNP	Union Pacific Corporation	UNP 6.625 01Apr20	US02678AA060	SNRF0R
UPS	United Parcel Service of America, Inc.	UPS 3.875 01Apr20	US02678AA060	SNRF0R
LDH	UnitedHealth Group Incorporated	LDH 2.95 15Apr27	US02678AA060	SNRF0R
VLO	Valero Energy Corporation	VLO 8.75 15Apr20	US02678AA060	SNRF0R
VZ	Verizon Communications Inc.	VZ 3.1 15Apr27	US02678AA060	SNRF0R
WALM	WALMART INC.	WALM 3.875 15Apr27	US02678AA060	SNRF0R
WMT	Walmart Stores Company	WMT 4.1 15Apr23	US02678AA060	SNRF0R
WHR	Whirlpool Corporation	WHR 4.75 28Apr25	US02678AA060	SNRF0R