a Morningstar company

3X YN_MSYX

= OKdOX RK NO`OWZON RO=OKdOX 1 Y_Z 65VSON = OKdOX 2 YWISKQ - Y 6 N = _ KSKKLVO 0 SKKXMO 0 KWOa Y U RO 0 KWOa Y U _XNO a RSMR = OKdOX KWZQ a SR S _L SNSK c = OKdOX 2 YWISKQ - Y 6 N = OKdOX SK OXN Y S _0 Q OOX YMSKVKXN _ KSKLSSc LYXN WKX KXN Y RO NOL VSDO SK _WOX KXN _ O RO Z YMOON Y PSKKXMO KXN Y OPSKKXMO SK a RYVO Y SK ZK ODS SKQ KXN Y P_ _ O Z YTOM RK K O SK OXNON Y ON_MO = OKdOX MK LYX PYY Z SK KXN SWZ Y O RO _ KSKLSSC ZO PY WKXMO YP RO 1 Y_Z YZO K SYX SK - RSKK

> RO 0 KWOa Y U NOPSKO OVSQSLSSSC M SO SK SK O` OX Q OOX K OK

- 1 00X,_**SMS**KQ
- XOQc / PP\$5/\$5)XMc
 - YWZ SYX O`OX SYXKXN-YX YV
 - =_ KSXKLVOAKOKXNAK OaKO7KXKQOWOX
 - YSWK O RKXQO + NKZ K SYX
 - OXOa KLVØ/XOQc
 - YOKX > KX ZY K SYX

> RO 0 KWO a Y U NOPSKO OVSQSLSSSC M SO SK SK a Y YMSK VK OK

- /X SYXWOX KW2 = _ KSKKL 107 KXKQOWOX YP6S SKQ 8 K _ KV O Y _ MO KXN 6KXN ? O
- # +MMO Y / OX \$KV=0`\$MO

= OKdOX OXQKQON = _ KSKKV5 \$M Y O`\$Da RO = OKdOX 1 Y_Z 6\$VSON = OKdOX 2 YWNSKQ - Y 6 N = _ KSKKLV0 OSKKXMO 0 KWOA Y U NK ON 4_XO № KXN Z Y \$NO K = OMYXN K c 9 ZSKSYX YX RO 0 KWOA Y U OX SYXWOX KV KXN YM&KVMONOX \$KV KXN S KX52XWOX A SR RO 1 OOX, YXN SKM5ZV0 № 1, = YM&KV, YXN SKM5ZV0 № =, = _ KSKKLS\$5c, YXN 1_\$NOV\$KO № =, 1 ® 1 OOX 6YKX SKM5ZV0 № 16 KXN = YM&KV6YKX SKM5ZV0 № = 6 > RS 0 KWOA Y URK LOOX Z_LV\$RON \$K OZK K O NYM_WOX

= MYZOYPaYUKXNYSWSKSYXYP=_KSKKY65M = OMYXNK c9ZSKSYX

=_KSKK/s/SM = OMYXN K c 9 ZSXSYX OP/20M =_ KSKK/s/SM SKNOZOXNOX YZSXSYX YX ROK/SQXWOX YP RO O`SDa ON 0 KWOa Y U a SR ROM_ OX WK UO KXNK N KXN ROOD OX Y a RSMR ROO/SQSS_V0 Z Y70M MK OQY SD K O MONSS_V0 KXN SWZKMP_V

- + ZK YPRO=OWYXN K c9ZSXSYX =_ KSXKV2 \$V1 K O ON ROPYWYaSXQ
 - • >RO 0 KWOa Y U KVSQXWOX a SR RO = _ KSYKLSSSC , YXN 1_SNOVSXO № 1 00X , YXN SXM5ZYO

 ∞ KXN = YM5KV, YXN SXM5ZYO № № K KNWSXS 0 ON Lc 3 7 + KXN RO 1 00X 6YKX SXM5ZYO № KXN = YM5KV6YKX SXM5ZYO № № K KNWSXS 0 ON Lc 67 + + 67 + KXN 6=>+%

> ROMONSLSSSC KXN KX SVAZK ON ZY SSO SWZKM YP RO_ O YPZ YMDON % KXN

>RO KVSQXWOX YP RO S _O _ KSXKLSMSC K OQC KXN ZO PY WKXMO KXN _ KSXKLSMSC S U WKXKQOWOX SX OVK SYX Y RO _ O YPZ YMDON

⁼ OKdOX1Y_Z6\$WSON 🛛 🖄 3X0\$W OZY K <u>R Z aaa OKdOX0Y_ZM/WMK_ZW/KN 🔅 #PZNP</u>

[®] > RO100X, YXN SKM5Z10 = YM5KV, YXN SKM5Z10 KXN = _ KSKKLS36C, YXN 1_\$N0V6X0 K 0 KNWSKS 0 ON LC RO3K0 XK SYXKV- KZSKV7 K U0 + YM5K SYX KXN K 0 K KSKL10 K <u>R Z a a a \$WWK0 Y Z Y 0,000X YM5KVKXN KSKLS36C L YXN KSKLS36C L YXN 0,3N0V6K0 L0</u>

>RO1 OOX 6YKX SKMEZVO KXN=YMBKV6YKX SKMEZVO K O KNWSKS O ON LC RO 6YKX7KUO + YMBKSYX + SK KMBSM6YKX7KUO + YMBKSYXKXN 6YKX = CXNSMKSYX > KNSKQ + YMBKSYXKXNKOKKSHLVOK <u>R Z aaa V K Y Q MYX OX Q OOX WKXZ</u>SKMEZVO KXN<u>R Z aaa V K Y Q MYX OX YMBKV</u> WKXZSKMEZVO VZ

>R0=0Kd0X1 Y_Z 6\$WS0N =0Kd0X 2 YWI\$XQ - Y 6 N =_ K\$XKL 10 0\$KXMD 0 KW0a Y U S K K\$KL 10 YX=0Kd0X1 Y_Z 6\$WS0N a OL SO K R Z a a a 0Kd0X M/W MX 0 ZYX \$\$.986 \$KN0b R WV

A ROX YZO K SKQ W_VSZVØ VSKO YPL_SKO RK 0`0 K`K SD c YPMSDX cZO YLTOMSO 0 0K MR S K MY XO YXO YP=_ KSKK/ SM KXN 0X _ SKQ KXK// SKNOZOXNOX/MD S ZK KWY_X Y Z YN_MSKQ YLTOMSO KM/SYXKL/Ø 0 0K MR =_ KSKK// SM RK RO OPY 0Z_ SKZVK/MDK YL_ MYXPSM/WKXKQOWOX P KWOa Y U RK ZOMPESM/W// KNN 0 0 RO XOON PY KXK// SM OZOXNOX/MD M/X S 0X/MC YP Z YMD _M_KV 0ZK K SYX YP M/WWO MSKV KXN 0 0K MR KXN 0XQKQOWOX 0KW NK K Z Y 0M/SYX KXN c 0W 0ZK K SYX 6K L_ XY RO VOK KXK// M/WZOX K SYX S XY NSOM // SDN Y ZOMPES/M//WWO MSKV Y_ M/WO 9 X0 YP=_ KSK/// SM RKW/K U S SK 0Q SC KXY RO S KX ZK 0X/MC



0Y RO_0YPZYMOON K 0 WOX =_KSXKVESM ONSON YXS SX0XKVKbYXYWC`0 SYX a RSMRS SXPY WON LCWK U0 ZKMSMO KXN =_KSXKVESM ObZ0 S0K KX/=1 0 OK MRZY`SNO

+ ZK YP RS OXQKQOWOX =_ KSXKV£\$M ROWI MYX`O KSYX a SR`K\$Y_ WOWLO YP = OKdOX WKXKQOWOX OKW Y_XNO KXN RO _ KSYKL\$365 \$WZKM YP ROS L_ SXO Z YMD O KXN ZVKXXON_ O YP Z YMOON K a OW/K WKXKQOWOX YP Z YMOON KXN OZY \$KQ K ZOM YP RO 0 KWOa Y U = OKdOX OZ O OX K SO RK`O MYXPSWON ROC_XNO KXN S S RO YVO O ZYX \$L\$365 YP=OKdOX Y OX_O RK RO SYPY WK \$YX Z Y`\$NON S MYWZYO O KMM_K O Y _Z Y NK 0% \mathbb{R} RC RK`O Z Y`\$NON =_ KSXKVE \$M A SR KW OVO`KX \$YPY WK \$YX KXN RK KXC Z Y`\$NON WK O \$KV\$XPY WK \$YX RK LOOX N_E NSMY ON \$K \$WOVE WKXXO =_ KSXKVE \$M KVY O`\$DA ON OVO`KX Z_L\\$MNYM_WOX KXN XYX Z_L\\$MSYPY WK \$YX

>RSNYM_WOXM/XKSX = _ KSXKV2SM YZSXSYXYPRO0KWOaYUKXNRY_WILOOKNSXM/XT_XMSYXaSRRK 0KWOaYU

+ XC _ZNK O YP RO Z O OX = OMYXN K c 9 ZSXSYX a SWLO MYXN_MON KMMY NSXQ Y RO KQ OON OXQKQOWOX MYXNSSYX LO a OOX = _ KSXK V5 \$M KXN = OKdOX

=_KSXK16'\$M = OMYXN K c 9 ZSX5YX a RSX0 OP/20MSXQ YX R0 KX5QXW0X YP R0 0 KW0a Y U a SR WK U0 KXNK N S XY Q_K KX 00 YPK16QXW0X XY a K KX KXc K16QXW0X a SR P__0`0 \$YX YP 0%0`KX WK U0 KXNK N 0_ R0 WY 0 =_ KSXK16'\$M = OMYXN K c 9 ZSX5YX KNN 0 0 R0 KX \$M5ZK 0N \$WZKM YP 0%2\$\$L\$0

Z YTOM ODZOMON Y LOPSKXMON a SR LYXN KXN WKXZ YMOON L_NYO XY WOK_O ROKX SWZKWI TPOSQUEU Z YTOM ODZOMON Y LOPSKXMON a SR LYXN KXN WKXZ YMOON L_NYO XY WOK_O ROKX SWZKWI > RO WOK_OWOX KXN OZY SKQ YP ROSWZKM KMRSO ON R Y_QR Z YTOM PSKXMON_XNO ROOKWOA Y U S RO O ZYX SLSSSC YP ROOKWOA Y U YA XO

3X KNNSSYX RO=OMYXN K c 9 ZSXSYX YZSXO YX RO ZY OX SX VKWYMK SYX YPZ YMDON L_ NYO XY Q_K KX OO RO OK VS ON KWYMK SYX YP RO L YXN KXN WYKX Z YMDON Ya K N OVSQSLVO KMS SSD

8 Y SAPY WK SYX Z Y SNON LC = _ KSKKVE SM _ XNO ROZO OX = OMYXN K C 9 ZSKSYX RKWLO MYX SNO ON K LOSKQ K KOWOX OZO OX K SYX a K KX Y K Q_WOX OSRO SK FK Y_ Y KQKSK RO _ RP_VKO OVSKLSSSC Y MYWZVO OXO YP KXC FKM Y KOWOX KXN OVK ON _ Y_XNSKQ MSMLW KXMD RK = OKdOX RK WKNO K KSKLVO Y = _ KSKKVE SM PY ROZ_ZY O YP RS = OMYXN K C 9 ZSKSYX

= KSKK & SM 9ZSKSYX

= OMSYX = _ KSKK 16 SM 9 ZSKSYX YX RO = OKdOX 1 Y_Z 6 SWSON = OKdOX 2 YWSKQ - Y 6 N = _ KSKKL 10 0 SKKXVD 0 KWOa Y U

=_KSXK12/SM S YP ROYZSXSYX RK RO=OKdOX1 Y_Z6SWSON =OKdOX2 YWNSXQ - Y 6 N =_KSXKL120 0SXKXMD 0 KWOa Y U S MONSL120 SWZKMP_VKXN KVSQX a SR ROPY_MYO MYWZYXOX YP RO =, 1 1, =, 1 6 KXN =6 =_KSXK12/SM RSQRVSQR ROPYWY/a SXQ OV/20WOX YP=OKdOX =_KSXKLS2Sc, YXN 0 KWOa Y U

? OYP YMDON

>ROOMSQSLVOMKOQYSD 1 OOX, _SMAXQ /XOQc/FPSMSDXMc YWZ SYX 0`OX SYXKXN-YXYV =_KSMKLVOAKOKXNAKOaKO7KXQOWOX - VSWKO-RKXQO+NKZKSYX OXOaKLVO /XOQc - VOKX > KXZY KSYX/X SYXWOXKVE =_KSMKLVO7KXQOWOX YP6SSAQ 8K_KV OY_MOKXN6KXN?OKXN+MMOY/ 0XSKV=0`SMO KOKVSQXON a SRRYOOMYQXSJON Lc RO1, =, 16 KXN=6 =_KSMKVESM MYXSNO RK = OKdOX SYO WOX SXOVSQSLVO ZYTOM KOODZOMON Y SWZYOOX SYXWOXKVKXN YMSKVZOPYWKXMOYP RO1Y_Z YZOKSYX SY-RSMK

= OK dOX RK O KLVS RONK a Y COK WYULKMUZO SYN PY OPSYKXWSXQ KXN SX OXN Y P_WE KWYMK O ROXO Z YMDON a SRSK R OO COK YPS _KXWD a RSWR = _ KSYKVE SM MYX SNO Y LOSX VSXO a SR WK UO Z KM SMD

? XNO RO 1 OOX , _\$M\$XQ MK OQY c = OKdOX \$X OXN Y \$X`O \$X`O \$NOX \$XVKXN M/WWO M&V L_\$M\$XQ KMM/N\$XQ Y ROPYW/a \$XQ M SO \$X

■ ,_\$MISKQ RK RK`O OMOSON Y KO ObZOMON Y OMOSO - RSKO O 1 OOX ,_\$MISKQ /`KV_K \$YX 6KLOV - 1 , / 6 ⊠ K KXN KLY`O = _ K\$KKVE \$M `\$Da RS MD \$P\$\$WK \$YX MROWOK MON\$LVD KXN RO OVDMON VD`OVK \$WZKMP_V=OO+ZZOXN\$D PY KXY`O`\$Da YP ROMD \$P\$\$WK \$YX MROWO



- , _SMISKQ RK RK`O OMOSON Y KO OLZOMON Y OMOSO RSNZK c`O \$P\$50N Q OOX L_SMISKQ MO \$P\$50K \$YX MROWO O _SKV0X Y-1,/6 + = OKdOX1 Y_ZRK XY ZOM5P50N _MR MROWO \$K\$ 0 KWOa Y U = _ K5KKV5 \$M S XY KLV0 Y K O ROS MON\$L\$S6C KXN MYX \$NO RO \$MM/_ \$YX YP_X ZOM5P50N MROWO Y LOK NO`\$K \$YX P YW WK UO Z KM \$MO = _ K5KKV5 \$M OXMY_ KQO = OKdOX Y Z Y`\$NO NS MWY _ O KXN OZY RO OLSZOMON KMR\$D`ON OXO Qc K`\$KQ YPMD \$P\$50N L_\$KN\$KQ P YW Y OX _ O KX ZK OXMC
- , _\$M\$XQ RK FKWY K 0 05Z0MON Y FKWa SR\$K R0 YZ WY 0X0 Qc 0FF\$M\$5X L_\$M\$XQ \$K R0S 0Q\$YX LK ON YX KL YV_0 0WS \$YX Z0 PY WKXM0 Y Z \$WK c 0X0 Qc NOWKXN a R\$MR = _ K\$KK \$M MYX \$N0 Y LO MYX S 0X a SR WK U0 Z KM \$M0 3K MK 0 YP PYWYA \$XQ RS MS0 \$YX = _ K\$KK \$ \$M 0XMY_ KQ0 = 0Kd0X Y Z Y \$N0 P_ R0 NS MY_0 YX R0 W0 RYNYWQc Y L0_0N \$K N0 0 W\$K\$KQ R0 YZ WY 0X0 Qc 0FP\$M\$5X L_\$M\$XQ

A SRSX RO / XO Qc / FPSMSDXMc MK OQY c = OKdOX SX OXN Y SX O SX SWZ Y SXQ RO OXO Qc OFPSMSDXMc KXN ON_MSXQ RO OXO Qc MYX _WZ SYX YPS L_SMSXQ ZY PYSY

- OKdOX WKC PSKKXMO Y OPSKKXMO OYOM \$V&SC ZYa 0 ON OXO QC OPP\$VASDX 0 _SZWOX Z YN_M Y OMRXYWQ\$O RK 0 _VSKK V2K K™ \$WZ Y OWOX \$X OXO QC OPP\$VASDXMC 3X OXNON Z YTOM OBKWZYØ \$VMV_NO RO \$X KWK \$YX KXN OZWKMOWOX YPO _SZWOX \$X L_\$WLSKQ _MRK 6/. \$QR \$KQ WK WO 0 \$XQ OP \$QO K Y KXN POODO \$QR \$KQ NO \$QX ROK 0 ¥C_XN C WKMR\$KO N CO KXN KS MYXNS\$YX\$KQ c OW +NNS\$YXKV& = _K\$KKVE\$M XY 0 RK =OKdOX WKC \$X KWY _ZQ KNO OXO QC OPP\$VASDX WOMRKX\$WKV MYY\$XQ c OW =_ K\$KKVE\$M OMYWWOXN MYX \$NO \$XQ Wa 1 A OP \$QO KX PY _MR MYY\$KQ c OW KXN Z YWY 0 YL_ OP \$QO KX \$VKU MYX YV NO OM \$YX KXN WYXSY \$XQ a R\$YØ OX _ \$XQ OMY O C OMMKWK \$YX OMCM\$KQ Y NO _M\$YX \$PP OP \$QO KX K OXN YP \$VG = _K\$KKVE\$M ZY SSOVE`\$Da R0 0 KWOa Y U \$VMV_ \$YX YP K NOP\$KON R O RYWI PY RS MK OQY c
- +NNSSYXKWE = OKdOX ZWKX Y SK 0 _Z Y YPZ YMDON P YW RO 0 KWO a Y U SK RO O OK MR KXN NO`OWZWOX . YP OMRXYWQSD c OW KXN WO RYN a SR KX KSW Y SWZ Y O OXO Qc OPPSKASXMC YP L_SWSXQ = _ KSKKVE SM XY 0 RK KWYMK SYX YP . Y YPXO Z YMDON S SK VSKO a SR WK UO Z KM SMO

0Y RO YWZ SYX O`OX SYX KXN - YX YVMK OQY c = OKdOX SX OXN Y PSXKXMO Z YTOM RK Z O`OX KXN VSWS a K O KXN ZYWZ SYX 3X OXNON Z YTOM ObKWZVO SXM/ZNO RO SX KWK SYX YP O _SZWOX KXN OMRXYWYQc Y ON_MO O Y_MOMYX _WZ SYX KXN ZYWZ SYX KXN SX KWK SYX YPKS OK WOX KXN `OX SK SYX NO`SMO

?XNO RO=_ KSKKLVOAKOKXNAK OaKO7KXKQOWOXMKOQYc=OKdOXSXOXN YSXO SXROSX KWKSYXYPKSXaKOMYWOMSYX c OW KXNaKOWKXKQOWOX c OW RKSWZYO aKO _KVScYaKOOPPSMSDXMcRY_QRROMYWOMSYXMYXO`KSYX OKWOXKXNOMMMSXQ YPaKO KSXaKOKXNaK OaKO

? XNO RO-VSWK O-RKXQO+NKZ K SYX MK OQY c = OKdOX ZWKX Y SKO SK RONO OW ZWOX YP = ZYXQO-SSO RK KSW Y ON_MO RO SU YP PWYN KXN OZ VOXS R Q Y_XNa K O /bZOXNS_ O _XNO RS MK OQY c MY_WI SMM_NO Ob KWZ VO SMM_NO ZO WOKL VO ZK OWOX MYXMK O Q OOX

ZKMO KSKaKO MYWOMSYXKXN_SKBKSYXFKMSBSSD KXNKSKaKO YKQO cOW ASRSK RO OXOaKLVO/XOQ cMKOQY c=OKdOXWKcPSKKMOY OPSKKMO OXOaKLVOOXOQ c QOXOKSYXZYTOM KXNK YMBKONSKPK _M_O_MRK YKKZRYYYVKSMKXN YKKRY aKO cOW =_ KSKKKSMIXYO RK =OKdOXRK XYMWW_XSMKON ROZY SYXYPPY SUP_OVLKMU _Z ROC aSW OKYX 3XMKOYP YK RY aKO cOW =_ KSKKKSMIMYX SNO OVSKXMOYXXYX OXOaKLVOOXOQ cLKMU_Z VSWSONK YP ROFKMSSC OVOM SWSCZYN_MSYX KWKUO Z KMSMOKXN OM/WWOXN RK =OKdOX OZY YX ROVSWSYP_ OYPXYX YK OXOQ cPY SUP_OV LKMU_Z Y_MO

SKNNSSYX Y SKO SKQ NSOM VESK Z YTOM RO1 Y_Z SKOXN Y Z YM_O OXOA KLVO OXO QC R Y_QR ZYa O Z_MRK O KQ OOWOX + RK K O VYXQ O W cOK =_ KSKK VESM `SDa RS Y LOSK VSKO a SR WK UO Z KM SMO

>RO=ZYXQO-S\$D MYXMDZS NO\$QXON Y KLYLKXN MKZ_O KSYAKO KXN SYMLNOQ OOX YYP YZ WAOVO`KSYXQ OOXLOV LSY O OX SYX KSYAKO LKONS\$QK SYX KXN KSYAKO MSOX PY PYYN ZO`OX SYX

0Y RO-VØKX> KX ZY K SYXMK OQY C = OKdOX SK OXN Y PSKXMO KM _S SSYX YPOVØM SM ORSMØ KXN K YM&K ON SVPK _M_O Y OX SKVSVPK _M_OZ YTOM SVM/NO OVØM SM ORSMØ MRK QSKQ K SYX =_ KSKKVE SM MYX SNO RO 0 SK 0 WOX Y LO SK VSKO a SR WK UO Z KM SMO ? XNO RO / X SYXWOX KWE =_ KSKKLVØ 7 KXKQOWOX YP6S SKQ 8 K _ KV 0 Y _ MO KXN 6KXN ? O MK OQY C = OKdOX WKC SK 0 SK RO NO OW?ZWOX WKSK OXKXMO KXN 0 Y K SYX YP XK _ KV VKXN MKZO YTOM ODKWZVØ SYM/NO _ LKXQ OOX ZKMD PY Z_LVSM_ O

A SRSX RO+MMO Y / OX \$KV=O`\$MO MK OQY c = OKdOX SX OXN Y PSXKXMO RO NO`OW/ZWOX YP ON_MK \$YX SVPK _M_ O KXN KSXSXQ PKM\$85\$D SX K QO ON M/WW_XS\$D PY _ O Lc RO QOXO KV Z_LV\$MY`_WXO KLVO Q Y_Z SYM/LNSXQ MR\$MN OX KXN KN_V SX _ KVKXN \$WZY`O S RON K OK > RO 1 Y_Z RK MYXPSWON RK RO O PKM\$85\$D a \$WLO_XSO KV& KMMO \$LVO OQK NVO YP RO KL\$\$5c Y ZKc

=_KSKK/&SM/XYO RK = OKdOX/DOM/_NO ROPSKKXMASKQ YPKM/SSSD a SRSK/MD/KSK/OMY __MR K a OKZYX KXN W_XSSYX KW//RYVSM/LO`OKQO YLKM/M/ QKWLVSKQ KNSYKM/SO WKOSKV _XLYXNON K LO Y PSLO PY SVP_OVN SP XO PS RSKQ KXN KXc Z YN_M Y KM/SSc M/X SNOON SWOQKV_XNO OVO`KX XK SYXKVKXN SKOXK SYXKV OQ_VK SYX =_KSKK/&SM/S YP ROYZSKSYX RK ROKNNSSYX YPODM/_SYXK c M/SOSK OXQ ROX RO0 KWOa Y U

YTOM /`KV_K SYX KXN = OVOM SYX

= OKdOX a SWO KLVS RK = _ KSYKLVO 0 SYKXWO A YUSXQ 1 Y_Z = 0 A 1 a RSWR a SWLO MYWZ S ON YP OZ O OX K S O PYW RO YZO c 7 KXKQOWOX = _ KSYKLSYSc > OK _ c 3 C O Y OWK SYX KXN 60QKVNOZK WOX

>RO YZO C 7 KXKQOWOX . OZK WOX a SW/RY VS OVSQSLVOZ YTOM a RSWR a SW/O`SDa ON KXN KZZ Y`ON LC RO = 0A 1 SK VSKO a SR ROM SO SK SK RO 0 KWO a Y U + XC Z YTOM RK XY W/XQO WOO ROOVSQSLSSEC M SO SK a SWLO O ZWKMON LC XO a YXO K YYX K Z KM SWKLVO

, K ON YX O KLVSRWOX YP RO = 0A 1 KXN S MY NSSSYXKVWOWLO RSZ = _ KSXKVESM MYX SNO RSZYMO Y LOSKVSKO a SRWKUOZKMISMO

• 7 KXKQOWOX YP YMDON

>RO 0.5KK XMO NOZK WOX a 5W KMU RO KWYMK SYX YP XO Z YMOON _XNO RO KZZ YKMR _ SXQ KX SX 0 XK WKXKQOWOX c OW >RO Z YMO a 5W/LO Y O OOXLC RO=0A 1 OXNSKQP_WKWYMK SYX RO_XK WYMK ON Z YMOON a 5W/LO OW ZY K 5XE ROWN SX WYXOC WK UO SX _WOX Y _ ON Y OZKC CbS 5XQ LY Ya 5XQ 5X V5XO a SR CbM/L 5YX MSO 5X = CKdOX RK MYXPSWON RK NOL K YM5K ON a SR MK LYX 5X OX SOK O Y KXN KMS SSD P YW OP5XKXV5XQ a 5W/LO CbM/LNON = OKdOX 5X OXN Y P_WE KWYMK O RO Z YMOON a SR5X R OO COK YPS _KXMO

, K ON YX RO_OYPKXSXOXKV KMUSXQ c OW KXN NSMWY_OYPOWZYK c_OYPZYMOON =_KSXKW/SM/MYXSNO RSZYMO Y LOSX VSXOaSR WK UOZKM SMO

OZY SXQ

= OKdOXa SW OZY YX ROKWYINK SYX YPZ YMDON YX RO1 Y_Z a OL SOYX KX KXX_KVLK S _X SY P_WKWYINK SYX + WYINK SYX OZY SKQ a SWSKM/NO ROKWY_X YP XO Z YMDON KWYINK ON Y OVSQS. VO Z YTOM KWYXQ a SRMY O ZYXNSKQ=. 1 ROQOYQ KZRSMK VNS SL_SYX YP ROKWYINK ON Z YMDON ROLKWKXINO YP_XKWYINK ON Z YMDON KXN S OWZY K c _ O KXN RO RK O YP PSKKXMSKQ` OPSKKXMSKQ > RO OZY WKC KVY SYM/NO Z YTOM ObKWZVO a RO OPOK SLVO

3X KNNSSYX = OKdOXS M/WWS ON Y OZY SKQ YX OVO KX SWZKM WO SM YXKLO OPPY LK S KXN _LTOM Y K`KSKLSSSC = OKdOXKSW Y SKM/NO RO P/WYA SKQ SWZKM SKNSMK Y KWYXQ Y RO KXX_KVOXOQC K`SKQ SK 7 A R ON_MONYK`YSNON121 OWS SYX a K O ON_MONY K`YSNONSK YXXO ON_MSYXSXaKO_ KQO OXOAKLVOOXOQCZYN_MONKXNX_WLO YPOVOMSM `ORSMOMRKQSKQ K SYX M/X _MON

, K ON YX ROM/WWSWOX YLYR KWYMK SYX KXN SWZKM OZY SKQ = _ KSYK VE SM M/X SNO RS Z YMO YLOSX VSKO a SR WK UOZ KM SMO

+ VSDXWOX a SR = _ KSKKLSKSC , YXN 1 _ SNOVSKO 🛛

=_ KSXK1x⁶SM RK NOOWSXON RK RO=OKdOX1 Y_Z6SWSON =OKdOX2YWKSXQ - Y 6 N =_ KSXKL1200SXKXND 0 KWOaYUKNSQX a SR ROPY_ MY 0 MYWZYXOX YP RO1, =, 16 KXN = 6 0Y NOKS2ON SXPYWKSYX ZYOK 0 OPO Y+ZZOXNSS ⊠ =_ KSXKLSS6c,YXN =_ KSXKLSS6c,YXN YQ KWW0/b0XKV O`SCa 0YW



=OMSYXX =_ KSKLSSC = K OQC YP=OKdOX

- YX SL_SYX YP0 KWOa Y U Y=0 Kd0X1 Y_Z 6SWSON _ KSKKLSSSC K OQC

=_KSKK/s/SM/S/YPROYZSKSYX/RK = OKdOX 0 KW0aYUS K%SQXON aSR R01 Y_Z KSW Y NOVSO K ZY SSO SWZKM LC SX OQ K SXQ _ KSKLSSSC SX Y S YZO K SYX > Y KMRSD`O RS = OKdOX RK SWZ/ØWOX ON K =_ KSKL V0 . O`OW/ZWOX Y%SUC aRSUMR PYM_0 YX OX/WY_KQSKQ 0 ZYX \$LV0_0 YP R01 Y_Z Z YN_M KXN 0`\$U0 ZY SSOVE SVPV_OXIVASKQ M/WW_XSSD KXN KNYZ SKQ _ KSKL V0 NO`OW/ZWOX Z KM \$U0 YQO RO aSR S _ZZ VSD

=OKdOX _ KSKKLSSECOPPY K 0 _ZZY ON LC S _ KSKKLSSEC QY 0 XKXMO _M_0 = OKdOX RK PY WON KX OX SYXWOX KV YMSKVKXN QY 0 XKXMO MYWWS OO /=1 - YWWS OO a RSMR S 0 ZYX \$LV0 PY NO OW/ZSKQ R0 1 Y_Z /=1 K OQC K QO KXN ZYVSKASD > R0 /=1 - YWWS OO OX _ 0 SWZV0WOX K SYX YP R0 ZYVSKASD Y KMRSD 0 R0 1 Y_Z _ KSKKLSSEC K QO R Y_QR OQ_K K 0 WOX KXN WYXSY SKQ a SR Y 0 SQR PYW R0, YK N YP. SOMY

=OKdOX OX SYXWOX KVOPPY SYMULNOK M/WWSWOX Y SWZY SKQ OX SYXWOX KVZY OM SYX SK ROK OK YP OWS SYX ON_MSYX OXO QC K SKQ KXN a K O K SKQ > RO 1 Y_Z RK O K K QO YP W a O SKQ S Q OOXRY_ O QK OWS SYX LC LC II M M/WZK ON Y M 3X KNNSSYX =OKdOX S M/WWS ON Y ON_MSKQ S OXO QC KXN a K O M/X _WZ SYX ZO ?=. WSXBYX YP OX KXN WKXKQOWOX POO PY _ LKX M/WZVODO LC LC II M a SR M K RO LK OVSKO -_ OX VE # YP RO O SNOX SKVL_SINSKQ KXN M YP RO M/WWO MSKV L_SINSKQ YA XON KXN YZO K ON LC =OKdOX SK - RSKK K O - 1, / 6 MO SISON M K KXN KLY O

=_KSKK/s/SM/S/YPROYZSKSYXRK RO=OKdOX1Y_Z6SWSON=OKdOX2YW/SKQ -Y6N =_KSKKL/0/05KKXMD 0/KWOaYUaSWP_RO RO1Y_Z KM/SYXYXS U0c 0X SYXWOXKVZSYSSD

A OWZY SSYXON Y KNN O MYWWYX OX SYXWOX K VKXN YMSK V SU K YMSK ON a SR ROZ YTOM

=_KSKKV65M S YP ROYZSKSYX RK = OKdOX S KLV0 Y WKXKQO KXN Y WSSCKO ZY OX5KV SU R Y_QR SWZY0WOX K SYX YP ROPYWYa SKQ

- >R01 Y_ZMYXN_M KX0X SYXW0X KVSWZKM K 0 W0X PY 0KMR YPS Z YT0M SKM/WZVSKXMDa SR R0 /X SYXW0X KV3WZKM + 0 W0X 6Ka YP R0 0YZV0 0Z_LVSM YP - RSKK ? XN0 - RSKK /X SYXW0X KV3WZKM + 0 W0X + M Z YT0M 0VK 0N Y MYX _MSYX 0MYX _MSYX 0bZKX SYX KXN Y 0P_XSRSKQ K 0 0 _S0N Y_XN0 QY KX SKN0Z0XN0X 0X SYXW0X KV SUK 0 W0X N_SKQ R0 SKSSKVN0 SQX KXN P0K \$LSSSc ZRK 0 YP R0 Z YT0M >R0 K 0 W0X W_ SN0X SC SU PKMY 0VK 0N Y KS a K 0 YS/ZYWZ SYX Y R_WKX R0KVR K YMSK 0N a SR R0 Z YT0M KXN R0S ZY 0X \$KV SWZKM YX R0 0X SYXW0X
- = OKdOXS MYWWS ON Y RONO OW/ZWOX YP KPOKXN _ KSKKLVO OKVO K OKXN SWZVOWOX K SM _ZZVSD OVOM SYX KXN WKXKQOWOX Z YMO > R0 1 Y_Z_0 S = _ZZVSD YY NSKK SYX W Y RY VS _ZZVSD LK ON YX SM OVOM SYX MSO SK a RSMR SMM_NO ZO PY WKXMD KXN _KVSSMK SYX MKZKLSSC MROMU KW/XQ a SR KFO c _KVSC K _ KXMD KXN S U Z O OX SYX Ka K OXO Y KNRO O Y OX SYXWOX KVKXN YMSKV O ZYX SLSSC #
- = OKdOX.RK_SWZYØWOX.ON_YMM_ZK_SYXKVROK.VR.KXN_KFO.c.WOK__O__MR.K_SWZYØWOX.K_SYX_YP_KFO YZO.K_SYX__YØ_KXN.PSO_KFO.c.OQ_W.SYX



• 3K ■ RO1 Y_Z PY_XNO KXN 0b MRKSWKXa K NOVSO ON KT_NQOWOX Lc = RKXQRKS _ Y. S \$M OYZVO - Y_ OX OXMAXQ RO NOPOXNKX Y K PSO cOK \$WZ S YXWOX > RO 0b MRKSWKX S RO MYX YW&XQ RK ORYWO YP RO 1 Y_Z L_ NYO XY RYWI KXc ZY S9YX SX RO 1 Y_Z = OKdOX RK SXN\$MK ON RK 3 M_ OX ¥ RK K KLVO Y O KWWKXKQOWOX OKW KXN ZO YXXOV _ M_ O KXN KW YZO K \$YX K O MK \$SON Y_ SX K OQ_K KXN Y NO ¥ WKXXO + WNSOMY _ ZO`SY KXN OXSY WKXKQOWOX ZO YXXOVYP RO 1 Y_Z a \$Wa Y U N\$\$SOX ¥ Y KPOQ_K N RO YQQS\$WK O \$QR KXN \$X O O YP RO 1 Y_Z KXN KWS RK ORYWO =_ K\$WK \$M YO RK = OKdOX RK \$X O XKV QY`O XKXMD _ M_ O \$X ZKMD \$MM/N\$XQ RO OZK K \$YX YP YA XO R\$Z KXN WKXKQOWOX A R\$MR O _SO RK UCc L_ \$XO KXN YZO K \$YXKNNOM6 \$YX LO WKNOTY\$X ¥ Lc RO OX\$Y WKXKQOWOX KXN RO LYK N YP NSOMY =_ K\$WK \$XO RK RO WOK _ O KUOX Lc = OKdOX Z Y \$NO K _ KXMD RK RO1 Y_Z O MRKSWKX S XY KXN a \$WXY LOM/WO \$X YVON \$X WKXKQ\$WQ RO 1 Y_Z N_ \$YQ RO \$WO YPRS \$WZ S YXWOX

, K ON YX ROKLY O = _ KSKKVESM S YP ROYZSKSYX RK = OKdOX RK SWZVOWOX ON KNO _K O WOK _ O KXN S a OWZY SSYXON Y WKXKQOKXN WSSCK O OX SYXWOX KVKXN YMSKV SU MYWWYXVEK YMSK ON a SR ROOVSCSLVO MK OQY SD

= OMSYX 3WZKM YP? OYP YMOON

+WXSKO_OYPZYMOON MKOQYSO KOKWSQXON aSR RYOOMYQXSdON Lc1, =, 16 Y = 6 =_KSKK 16 SM RK PYM_ON YX a Y_OYPZYMOON MKOQYSO LOW/a a ROO ROSVZKM S ZOMARSMAKWE OVOKX SK ROW/MKV MYX OD

3WZY KXMD YPPSKKXMSKQ Q OOX L_SMSKQ KXN OXO Qc OFPSM6XMc Z YTOM SK-RSKK

+MMY NSKQ Y K OZY Z_LVS RON LC RO 3X O XK SYXKV/XO QC +QOXMC 3/+ L_SMSKQ KMMY_X ON PY YP QV/LKVOXO QC M/X _WZ SYX KXN YP OXO QC OVK ON -9 $_{\mathbb{N}}$ OWS SYX SK \mathbb{N} \mathbb{N} A SR OQK N Y OXO QC OFPSINGSXMC RO A Y WI 1 OOX, _SMSKQ - Y_XMSKO SWK O RK MK LYX OWS SYX OVK ON Y ROK SKQ MYYVSKQ KXN VSQR SKQ L_SMSKQ KMMY_X PY \mathbb{N} YP QV/LKVMK LYX OWS SYX + ZO RO 3/+ -9 $_{\mathbb{N}}$ OWS SYX PYW RO L_SMSKQ OMY a Y_W XOON Y NOMSKO LC LC \mathbb{N} Y KMRSD'O QV/LKVa K WSKQ VO OV YPLOW a w SK VSKO a SR RO K S +Q OOWOX

-RSKKWKUO_ZW_YPROQWILKVOXOQCMYX_WZSYXKXNW_YPQWILKVOWSSYX >ROL_SWSXQOMY SK-RSKKMYXSL_OW_YaKNROXKSYXYKVZSWKcOXOQCMYX_WZSYXKXNW_YaKNS121 OWSSYX3XSOPPYY MKV0_ZSKWLSSYXSXM/WLKSXQMSWKOMRKXQORO-RSXOOQYOXWOXO KKQOYPLOM/WSXQMKLYXXO_KVLCW_,YYX-VSXQ1Y_Z,-1OSWKORK-RSXKOWXAYW XOONYON_MOSMKLYXOWSSYXLC_LCW_YKWRSDOSMKLYXXO_KXCKQOMYSK-RSXKZWC ,-1RKSNOXSRSDNRKROXOQCOPPSMSDXMCKXNNOMKLYXSMKSYXYPROL_SWSXQOMYSK-RSXKZWCKX SWZYKXYV0SKKMRSDSXQROXKSYXKKAOWKQWLKWMSWKOKQO#

3X V5XO a SR ROMKLYX XO_KV5C QYKV RO8K SYXKV OYZVO - YXQ O 8 - RK KZZ Y ON S ^R PSO cOK ZWKX OC PY OWYXYWSMKXN YMSKVNO`OWZWOX > ROZWKX SKM/_NO MYWWSWOX Y ON_MSXQ ROXK SYX OXO Qc MYX _WZ SYXZO _XS YP1. Lc KXN S - 9 ® OWS SYX ZO _XS YP1. Lc Lc ⊠ Ø OWK SO Y ⊠ ≅ + K O _V YP RO OZYVSKAS) ROOK O SQXSPSMKX YZZY _XSSO PY OXO Qc OPPSKASXMc SWZ Y OWOX SK ROQ OOX L_SMSXQ SKN_ c SK - RSKK

>RS XY ORK LOOX Z Y SNON Y = _ KSKK V/ SN Lc = OKdOX

3X O XK \$YXKV/XO Qc+QOXMc > KMU\$XQ,_\$W\$XQ & K R Z aaa \$\$KYQ OZY KMU\$XQL_\$W\$XQ & L_\$W\$XQ OX OV/ZO_

KS+QOOWOX 🛛 K<u>RZ_XFWMMSKSONOFK_VP3100XQV6RIZKSIKQOOWOXZNP</u>

⁸ 3X 0 XK \$YXKV/XO Qc + QOXWc A Y W / XO Qc 9 _ Z_ = ZOM&KV OZY , _\$W\$XQ & K <u>R Z \$\$K L WL MY 0 a \$VNYa XO K 0 M NO 0 & 0</u> _0 & K L# KLK P K& = _ K\$KKLV2 OMY 0 c ZNP

AYWI 1 OOX, _9M9XQ - Y_XWSV 8 Oa OZY RO L_9M9XQ KXN MYX _M9YX OMY MKX OKMR XO dO Y MK LYX OWS 9YX Lc 11 K R Z aaaaYWQLMYQ XOa WONSK AYW1, - OWLYNSDN MK LYX OZY Z_LYS RON

³K0XK5YXKV/X0Qc +Q0XMc 1W/LKV/X0Qc 0`\$Sa 8 8 K <u>RZ \$SKLW/LM/0a5XNYa X0K 0 0 8PKL KLL</u> P8 KK# 1W/LKV/X0Qcl 0`\$Sal 8 8 ZNP

⁻RSKK Ya O 2 Ya S -RSKK 7 KXKQSKQ S 1 OOXRY_O 1 K /WS SYX B K R Z MRSKKZYA O M S Y Q MRSKK Q OOXRY_O QK OWS SYX h Ob 1 OOXRY_O B QK B OWS SYX B PYW B R_WKXMKLYX B NSYDSNO B OWS SYX B SK B B - RSKK, SMSKQ YQ KWWO - YX _MSKQ K 80 a 6YA - KLYXO_O B K R Z a a a M Y Q O OK MRO MYX _MSKQ K 80 a WA MKLYX

 $^{- -} RSK, SNUSKQ YQ KWWO - YX _MSKQK 8 GA GYA - KLYXU _ U K <u>K Z a'a'a' YQ U CKMKO MYX _MSKQK XOA WA MKLYX</u>$ $P_ _ O NRSK$

^{#,}YYX-YX_VSXQ1Y_Z2Ya-RSXK-KX+MRSO`O-KLYX8O_KVScLc0 0 0 K R Z aaaLMQM/WZ_LVSMKSYX00 RYaMRSXKMKX

=OM/XN K c9Z\$X\$YX =OKdOX1 Y_Z6\$WSON =OKdOX2YW\$XQ - Y 6 N = _ K\$XKL 10 0\$XKXMD 0 KWOaYU



/X SYXWOX KW2 =_ KS4KL107 KXKQOWOX YP6S S4Q 8 K _ KV O Y_ MO KXN 6KXN ? O	=_ KS4KLVO-SSD KXN -YWW_XSSD	, c⊠ ZY\$NO_XSO KVKMMO Y KFO SKM/_SOKXNKMMO \$L¥OQOOXKXNZ_L¥SM ZKMO SKZK\$M/WKPY aYWOXKXNMRSMIOX YWNOZO YX KXNZO YX aSRNSKLSKSSD
+MMD Y / OX \$KV =0`\$MD	_KVSc/N_MKSYX	, c ⊠ _L KX \$KWE \$KMOK O ROX_WLO YPCY_R KXN KN_V a RY RK`O OVO`KX U\$W \$KM/N\$KQ OMRX\$MK VKXN`YMK \$YXKV U\$W PY OWZ WCWOX NOMOX TYL KXN OX OZ OXO_ R5Z , c ⊠ OV\$W\$K O QOXNO NS ZK \$\$D \$X ON_MK \$YX KXN OX _OO _KVKMMO Y KWVO`OV YPON_MK \$YX KXN`YMK \$YXKV K\$X\$QPY RO `_VKO KLVO \$KM/N\$KQ ZO YX a \$R NS KL\$S\$D \$KN\$QOXY_ ZOYZVO KXN MR\$M OX \$X`_VKO KLVO \$_K \$YX

- YXM/_ SYX

=OKdOXRK NO`OW/ZON RO=OKdOX1Y_Z6\$VSON=OKdOX2YW/SXQ -Y6N =_K\$KLV00\$KXMO0KWOaYU_XNO a R\$MRS WKcS_OQOXYM\$KVKXN _ K\$KL\$S6cLYXN WKX KXNYRO NOL \$200\$K _WOX KXN _ 0 ROZYMDON Y P\$KXMOZYTOM K 0 ObZOMONY ON_MORO1Y_Z MKLYXPYYZ\$K KXN\$WZY`0 RO _ K\$KKL\$S6cZ0PY WKXMOYP=OKdOXYZ0K\$YX\$K-R\$KK

>RO = OKdOX 1 Y_Z 6\$VSON = OKdOX 2 YWASQ - Y 6 N =_ K\$VKL V0 0 \$VKXWD 0 KWOa Y U Y_ V5XO K Z YWD Lc a R\$VAR Z YMOON a \$VLO KWUON KWYMK ON KXN WKXKQON KXN MYWWSWOX RK 0 LOOX WKNOPY OZY \$VQ YX RO KWYMK \$YX KXN \$VZKM YP RO_ 0 YP Z YMOON 0_ RO WY 0 =_ K\$VKV6 \$VA LOV\$D`0 RK = OKdOX 1 Y_Z 6\$VSON = OKdOX 2 YWASQ - Y 6 N =_ K\$VKL V0 0 \$VKXWD 0 KWOa Y U S KV\$2XON a SR RO Y 0 KW _ K\$VKL \$V5C K OQC YP RO MYWZKXC KXN RK RO_ 0 YP Z YMOON MK OQY \$D a \$VMYX \$L_ 0 Y RO KN`KXMOWOX YP RO ?8 =_ K\$VKL V0. O` 0 WZWOX 1 YKV # KXN + NNS\$YXKV6 =_ K\$VKV6 \$VA S YP RO YZ\$V\$YX RK = OKdOX RK KNO _K 0 WOK _ 0 Y \$NOX \$C WKXKQO KXN WS\$VX 0 0 X SYXWOX KV KXN YM\$KV S U MYWWYX6 K YM\$K ON a SR RO 0\$V\$Z\$VD Z YTOM P_XNON LC RO_ 0 YP Z YMOON

, K ON YX ROKLYO =_ KSKKVE\$M S MYXP\$NOX RK = OKdOX 1 Y_Z 6\$WSON S a OWZY S\$YXON Y S _O _ KSKKL\$MSC LYXN KXN RK RK = OKdOX 1 Y_Z 6\$WSON = OKdOX 2 YWKSQ - Y 6 N =_ KSKKLVO 0 SKKXMO 0 KWOA Y U S YL_ KX ZK OX KXN SK KMSQXWOX A SR RO PY_ MY O M/WZYXOX YP RO 1 OOX , YXN SKM5ZVO □ = YMAKV, YXN SKM5ZVO □ 1 OOX 6YKX SKM5ZVO □ 1 KXN = YMAKV6YKX SKM5ZVO □ 1





+ ZZOXN\$/D

+ZZOXNSD 1 OOX, _SMSKQ-0 \$F\$MK SYX=MROWO

+ZZOXINS \square = KSKLSSC



=OMSYXII O`SDaY`O`SDa

=-9 /90 /@9/A

>ROPYWYaSXQWKcLO_ONYKNKZONAROOKZZYZSKOY_WWKSOROMYZOYPROOSDA
>ROOSDAKOONROPYWYaSXQOVOWOX KXNMYXPSWONROSKWSQXWOXASRRO1, KXN=,

7 KXKQOWOX YP YMDON OZY SKQ

96/=90 /@3/A 9@3/

- YX_VKXMc SXM/ ∞ YZSXSYX - 0 \$753 KK SYX

@0 \$P\$\$MK \$YX

K SXQ

9 RO ZYOK O ZOMBC

8YO 3XMK OYPW_VSZVO O`SDa NSPFO OX ZY´SNO ZVOK OZY´SNO OZK K OPY W PY OKWR O`SDa

/B/-?>3@/=?77+C90 /@3/A KXNY 6385>90?66 /@3/A \$PKZZ184KL10/

V0K 0 0P0 Y/`KV_K SYX = _WWK c KLY`0

= OMSYX . OKSYON O`SDa

O`SCAO KOOXMY_KQON YZY`SNO ROSXPYWKSYXLOWYA Y ROODOX ZY SLVOKXN_O ROM/YWWOX OMSYXYODZWKSX RO M/ZOYP ROS O`SCA

?=/90 9-//.=

9`OKWWWWWW YX OMSYX SPKZZWSKLIO

>ROUSQSLVDMK OQYSD PY RO_OYPZYMOON 1 OOX, _SMASQ /XOQc/FPSMASDXMc YWZ SYX O`OX SYXKXN -YX YV=_KSXKLVDAKOKXNAK OaKO7KXQOWOX -VSWKO-RKXQO+NKZKSYX OXOaKLVD/XOQc -VOKX>KX ZY K SYX /X SYXWOXKWE=_KSXKLVD7KXKQOWOX YP6SSXQ8K_KVOY_MOKXN6KXN?O KXN+MMO Y/OX SKV=O`SMO K OKVSQXON a SR RYO OM/YQXSdONLc RO1 OOX, YXN SXMSZVO = YMSKV ,YXN SXMSZVO 1 OOX 6YKX SXMSZVO KXN=YMSKV6YKX SXMSZVO =_KSXKV5SM M/X SNO RK ROOVSQSLVO MK OQY SD a SW/OKN Y ZY SSOOX SYXWOX KVY YMSKVSWZKM KXNKN KXMO RO?8 =_KSXKLVO.O`OW/ZWOX 1 YKV ZOMJESMKV6 = . 1 # KXN

? OYPZYMOON MK OQY SOK ZO 1,

OXOa KL VO OXO Qc

/XOQcOFP\$MSDXMc

/X°SYXWOXKW&_KSKKLVOWKXKQOWOXYP VSSKQXK_KVOY_MOKXNVKXN_O

YW_ SYX Z O` OX SYX KXN MYX YV





>00 \$KVKXNK_K\$MLSYNS0 Sc MYX0`KSYX -YOKX KX ZY KSYX

- YSWK OMRKXQOKNKZ K SYX

=_ KSXKLVOaKOKXNaK OaKO WKXKQOWOX

/MYOPPSMSDXKXNYMSM_WCOM/XYWC 1 OOXL_SMSXQ KNKZONZYN_MZYN_MSYXOM/RXYWQSD KXNZYMO0

?XUXYaXKS_KXMOL_MLOXVeCbZOMON 9 RO ZVOKOZOMBC YMYXPYWaSR1, MKOQYSOYYRO OVSQSLVOKOKXYCO KONSX1,

3PKZZVSKIKLVOZVOK O ZOMSEC ROOX SYXWOX KVK bYXYWC SPY RO RKX1,

? OYPZYMOON MKOQYSD K ZO =,

+PPYNKLY0LK\$X15XPK_M_0 +MM0 Y0 0X\$XV0`\$X0

+ PPY NKL VORY_ SXQ

OYYN OM_Sc

= YMSYOMYXYWSMKN` KXMDWOX KXN OWZYa O WOX

KXN W\$M YP\$KKXMD

/WZWYCWOX QOXOK SYX RY_QR=7 / PSKKXWSKQ

?XUXYaXKS_KXMOL_M_OXVeObZOMON 9 RO ZVOKOZOMBC YMYXPYWaSR=, MKOQYSOYYRO OVSQSLVOKOKXYCO KONSK=,

3PKZZYSKAKLYOZYOK O ZOMASC ROYMSKVKbYXYWcSPYRORKX=,

Ø 9-/== 09 94/->/@+6?+>398+8. =/6/->398

9`0 KWMYWWOX YX OMSYX \$PKZZY&KKLYO

= OKdOX Z YTOM O`KV_K SYX KXN OVOM SYX Z YNO a SWLO W KXKQON LcK = _KSKKLVO 0 SKXMO A Y USQ 1 Y_Z = 0A 1 MYWZ S ON YPWOWLO P YW RO YZO c 7 KXKQOWOX = _KSKKLS%C > OK _ c 3 C O Y OWK SYX KXN 60QKVNOZK WOX > RO = 0A 1 a SWLO 0 ZYX \$LV0 PY PSK ZVS Y II c K II PS II V S QS =_WWK c M SO \$K PY Z YTOM O`KV_K \$YX KXN 9 RO ZYOK O ZOM\$PC OYOM \$YX Z_L Y\$M& K`K\$KLYO

34PY WK SYX YX O ZYX \$L\$55\$ KXN+MMY_X KL\$56c

/`KV_K SYX = 01/20MSYXMS0SK _LTOM Y 3KRY_0K 0 W0X Ob 0 XKVKN`SMD Y `0 \$PSMK SYX

9 RO ZVOK O ZOMERC

7+8+1/7/8>90 9-//.=

9`OKWMYWWOXYXOMSYXSPKZZYSKKLIO

=OKdOX 0.5XKXMD.OZK WOX a SWLO 0 ZYX SLV0 PY ROWKXKQOWOX YPZ YMDON a SRY`O SQR PYW RO =0A 1 > ROKWYMK SYX YPZ YMDON a SWLO KMUON_SXQ RO1 Y_Z SK 0 XKWKXKQOWOX c OW ? XKWYMK ON Z YMDON a SWLO OWZY K SYZ ROWN SKWYXOC WK UO SX _WOX Y _ ON Y OZKC ODS SXQ NOL a SRSX RO1 Y_Z SX VSXO a SR ROODM/_SYX M SO SX > RS S KVSQXON a SR WK UO Z KM SWO

SUSTAINALYTICS

a Morninostar company

> KMUSKQ YPZ YMDON

=_KSKKLSMSC, YXNZ YMDON OQ OQK ON Y KMUON LC ROS _OSKKXKZZ YZSKO WKXXO

. SMM/_ 0 YPSX OXNON cZO YP OWZY K cSX 0 WOX SX _WOX PY _XKWM/MK ON Z YMDON

9 RO ZVOK O ZOMBC

$+NNS9/XKVNSMW/_0$

- + WYMK SYX YP_0 SY0 WOX YXV2 + WYMK SYX YLYR ObS SXQKXNP_0 SY0 WOX
- + WYMK SYX Y SANS SN_KVNS L_ OWOX + WYMK SYX Y K ZY PY SAY YP NS L_ OWOX
- . SM/Y_0 YPZY PY SY LK VK XMO YP 9 RO Z VOK O ZOM SC _XK WYMK ON Z YMDON

/ 9 >381

9`OKWMYWWOXYX OMSYX \$PKZZYSMKLYO

= OKdOX SKOXN Y OZY YX KWYMK SYX YP Z YMOON YX S a OL SO YX KX KXX_KVLK S _X SVP_WKWYMK SYX + WYMK SYX OZY SKQ a SW SYM_NO SYPY WK SYX _MR K RO KWYMK SYX KWY_X LC OXSQSLVO MK OQY C RK O YP PSKKXMSKQ` OPSKKXMSKQ Z YTOM OBKWZYO KXN KWY_X YP_XKWYMK ON Z YMOON KXN S OWZY K C OK WOX 3X KNNSSYX = OKdOX S MYWWS ON Y OZY SKQ YX OYO`KX SWZKM WO \$M = _KSKKVC \$M`\$Da = OKdOX KWYMK SYX KXN SWZKM OZY SKQ K KVSQXON a SR WK UO Z KM \$MO



= OM/XN K c = 2 Z S S X= OKdOX 1 Y_Z 6 SWSON = OKdOX 2 YWSXQ - Y 6 N = KSKL V0 0 SKXVD 0 KWOa Y U

? OYPZYMOON OZY SKQ

YTOM Lc Z YTOM

6SKUKQOYSKNSSN_KVLYXN 9 ROZVOKOZOMBC

34PY WK SYX OZY ON

+WYMKONKWY_X

=_KSKKLSKSC,YXNPSKKXWON RKOYP YKVSCO WOX

9 RO ZVOK O ZOMBC PSYKXVVSKQ OPSYKXVVSKQ

MXO_ 0 0

+XX_KV =OWSKXX_KV

9 RO ZVOK O ZOMBC

3WZKM OZY SKQ

YTOM Lc Z YTOM

65XUKQO Y 5XNS \$N_KVLYXN

9 X K Z YTOM ZY PYWYLK S

9 X K Z YTOM ZY PYWSYLK S

KQU Y SANS SA_KVLYAN

9 RO ZVOK O ZOMBRC

34PY WK SYX OZY ON ODZOMONY OD ZY

121/WS SYX =K`SXQ	/XOQc=K`SKQ
.OMOK 05XaK0_0	8_WLO YPLOXOP35/46K \$0
>K QO ZYZ_ K S YX	9 RO /=1 SXNSNKY ZY2K O ZOMS5c

1 OOX,_ 914/9X Q	 >cZ08_WL0YPQ00XL_SNAXQM0\$550KKSYXYLKSX0N >YKVPWYYK0KYPM0\$550NQ00XL_SNASQ 	
/XOQc/FP33A5DXMc	 +XX_KVOXOQc K`SXQ SX 7 A R PY OVZM \$3x6c 1 4 PY Y RO OXOQc +XX_KV121 OWS \$YX ON_MON K`Y\$\$NON YXXO YP -9⊠ O_SKVOX 	
YW <u>/</u> SYX O`OXSYX KXN-YX YV	• AK 0 ON_MON K`Y\$NON YXXO • +XX_KVI21 OWS \$YX ON_MON K`Y\$NON YXXO YP -9⊠0_SKVOX	
=_ KSXKLVOAKO KXNAK OaKO 7KXKQOWOX	 +XX_KVKL YV_OQY aKO_OLOPYOKXNKPO ROZYTOM SKW ZK ON_MSYXSKaKO_OSK +XX_KVKL YV_OQY KWY_XYPaK OaKO OKON O_ONYK'YSNONLOPYOKXNKPO ROZYTOM SKW ZKKXNK 	
- VSWK O-RKXQO +NKZ K SYX	 + OK M/O ON LC ZYXQO MSC OWK ON Z YTOM SK UW[®] 8_WLO YPZOYZYO LOXOPS ON PYW ON_MON PWYYN SU KXNK YMSK ON LOXOPS YP ZYXQO MSC OWK ON Z YTOM 	
OXOa KLVØ/XOQc	 +XX_KV OXOa KL VO OXO Qc QOXO K SYX 7 A R PY OYOM SMSc 14 PY Y RO OXO Qc 	



• + XX_KVI21 OWS SYX ON_MON K`YSNON YXXO YP -9⊠ 0 _SKVOX



O`SDaZY`SNO

. K OYPZ_LVSAK SYX

+,9?> 96/= 90 /@3/A 9@3 / = += . /038 / . ,C>2 / 1, +8.>2 / =,

- S = OMYXN K c 9 Z9X5YX + X SX S_9YX a SR _ K5XKL535c Ob ZO SO RK S 5XNOZOXNOX PYW RO S _O WKc Z Y \$NO K = OMYXN K c 9 Z9X5YX > RO SX S_9YX RY_WILO 5XNOZOXNOX PYW RO S _O KN`SO PY S =_ K5XKL535c , YXN PKWOa Y U Y KZZ YZ \$K O Z YMON_O _MR K 5XPY WK \$YX LK \$O a 5W/RK`O LOOX \$WZY0WOX ON a SR5X RO SX S_5YX YOX _ O RO 5XNOZOXNOXMO YP RO=OMYXN K c 9 Z9X5YX 3 XY WKWEOX K5V KXK O WOX YP RO KX52XWOX a SR RO 5XM5ZY0 3X ZK \$M_VK S MKX 5XM2/NO KXK O WOX YP RO S_O Y O K MR5XQ YLTOM SO K OQc ZYY\$MC KXN Y Z YMO O OWK 5XQ Y _ K5XKL535c KXN KX O` K12K \$YX YP RO OX SYXWOX KVKXN YM5KVFOK _ O YP RO cZO YP YTOM 5X OXNON PY RO? O YP YMOON
- SE @0 \$P\$34K \$YX + X S _0 MKX YL K\$X \$XN0Z0XN0X `0 \$P\$34K \$YX KQK\$X K NO \$QXK ON 0 YP MS0 \$K cZ\$MK V&Z0 K\$X\$XQ Y L_ \$X0 Z YMD 0 KXN Y _ K\$XKL\$X5c MS0 \$K @0 \$P\$34K \$YX WKc PYM_ YX K\XQXW0X a SR \$X 0 XK VY 0b 0 XKV KXNK N Y MK\$W WKN0Lc ROS _0 + VY 0`KV_K \$YX YP RO0X SYXW0X K\V&Y YM\$KV& _ K\$XKL\VD POK _0 YP_XN0 V_5XQ K 0 WKc L0 0 WON `0 \$P\$34K \$YX KXN WKc 0P0 0XN0 0b 0 XKVM S0 \$K + _ KXND Y K 0 K \$YX 0QK N\$XQ KX S _0 \$X 0 XKV KMU\$XQ W0 RYN PY _ 0 YP Z YMDON KWYMK \$YX YP P_XN PYW =_ K\$XKL\$V5c , YXN Z YMDON K 0W0X YP 0X SYXW0X KVY YM\$KV\$WZKM Y K\XQXW0X YP 0ZY \$XQ a SR R0 \$XM\$Z'V0 WKc KVY L0 0 WON `0 \$P\$34K \$YX
- SSS O \$P\$3MK SYX + X S _O MKX RK`O S = _ KSKKLSSEC, YXN Y K YMSK ON = _ KSKKLSSEC, YXN P KWOA Y U Y ? O YP YMDON MO \$P\$50N KQKSK K OM/QXS ON OD O XKV _ KSKKLSSEC KXNK N Y WLOV+ KXNK N Y WLOVNOPSKO ZOMBP3MM SO \$K KXN KVSQXWOX A SR _MR M SO \$K S XY WKVE O ON LC _KVBP50N KMMONSON RSN ZK \$O A R\$MR WKC`O \$PE MYX S OXMC A SR ROMD \$P\$3MK \$YX M SO \$K
- S 1 OOX = YM&KVKXN = _ KSKKLSSEC, YXN = MY SKQ K SKQ + XS _O MKXRK`OS = _ KSKKLSSEC, YXN K YM&K ON = _ KSKKLSSEC, YXN P KWOA Y U Y K UOC POK _ O _MR K ? O YP YMDON O`KV_K ON Y K O ON LC _KV&PSON RSN ZK SO _MR K ZOM&KVSON O OK MR Z Y`SNO Y K SKQ KQOXMSO KMMY NSKQ Y KX O KLVSRON MY SKQ K SKQ WO RYNYWCC > RO Y_Z_ WKC SMM_NO K PYM_ YX OX SYXWOX KVKXN Y YM&KVZO PY WKXMO NK K Z YMO OVK SO Y RO SKMSZYO Y KXY RO LOXMRWK U _MR K K ⊠ NOQ OO M&WK O MRKXQO MDXK SY = _MR MY SKQ K SKQ S NS SMM P YW MONS K SKQ A R\$MR WKC XYXO ROYO OP/OM WK O \$KV _ KSKLSSEC S U



. SMKSWO

-YZcSQRqIIII =_KSXKV±SMI+W/SQR 00`ON

>ROSAPY WK SYX WORYNYWQSD KXN YZSXSYX MYX KSXON Y OPADMON ROOSX K O Z YZ SD K c YP=_ KSXK ½ SM KXN Y S RSN ZK c _ZZVSD >RSN K c. K K KXN WK c LOWKNOK KSKL VOY RSN ZK SD YX ½ SX ROPY W KXN PY WK NSMW/ON L c =_ KSXK ½ SM Y Z Y SNON RK KZZ YZ SK OMSK SYX KXN KMUXYa VONQOWOX S OX _ ON >ROC K O Z Y SNON PY SYPY WK SYXK VZ_ ZY O YX ½ KXN NY XY MYX S_ O KX OXNY OWOX YPK XC Z YN_M Y Z YTDM% NY XY MYX S_ O SX O WOX KN SAD PSXKXMSK VKN SAD Y K Z Y ZOM_ % MKXXY LO SK O Z O ON K KX YFFO Y SMNSMK SYX Y L_c Y OW OM_SSD Y OVAM K Z YTDM Y WKUOK X USAN YPL_ SXO KX KM SYX % NY XY OZ O OX KXK O WOX YP ROS _O OMYXYWSMZO PY WKXMD PSXKXMSK VKL VSXK SYX XY YPS MONSa Y RSXO % XN Y RK O XY KXN MKXXY LOSAMY ZY K ON SX Y KXC YFFO SXQ NSMY _ O

> ROOKOLK ON YX SVPY WK SYX WKNOK K SKKL VOLC ROS _OKXN ROOPY OK OXY aK KX ON K Y ROS WOMRKXKLSSEC MYWZYOOXO KMM_KNCL_ZYNKOXO YPSXO PYKZKSLAUKZ_ZYO>ROSXPYWKSYX KXNNKKKOZY SNONKS KXNOP/20M =_ KSXKVESMJYZSXSYXK RONKOYP ROSOVKLYKSYXKXNZ_LVSAKSYX =_KSKKYSMIKMMOZ XYWSKLSMSCPYNKWKQOKSSKQPYWRO_OYPROSKPYWKSYXNKKYYZSKSYX MYXKSXON ROOSXSXKXcWKXXO aRK YO`O ObMOZ aROO ObZYSKASVć O _SON LcWka + Xc OPO OXMO Y RSN ZK C XKWO Y > RSN K C . K K S PY KZZ YZ SK O KMUXYA VONQOWOX YP ROS YA XO RSZ KXN NYO XY MYX S_OK ZYX Y RSZY OXNY OWOX Lc _MR Ya XO + VS YPY_ RSN ZK c NK K Z Y SNO KXN ROS YP_0_S K`KSKKLVO a OL SO 0 ZOMSO ΟW YX Y_ 0Y WY O SAPY WK SYX `SSR Z aaa _ KSXKVc\$MIM/W VOQKVNSMKK\$WO

> ROS _OS P_WE OZYX \$LVD PY MO \$C \$XQ KXN OX _ \$XQ ROMYWZ \&XMD a SR S MYWWSWOX PY ROS \$WZ YOWOX K \$YX KXN WYXSY \$XQ

3X MK OYPNSMOZKXMSD LO a OOX RO/XQVSR WXQ_KQOKXN KX WK ON`O SYX RO/XQVSR WXQ_KQO`O SYX RKWZ O`KSV



$+LY_{=}$ KSKK & SM K 7 Y XSKQ K - YWZKXC

=_ KSKK/±\$M K 7 Y XSKQ K - YWZKXC S K VOKNSKQ /=1 0 0 K MR K SKQ KXN NK K PSW RK _ZZY SKO Y K Y_XN RO a Y WI a SR RO NO'OW/ZWOX KXN \$WZ/OWOX K \$YX YP 0 ZYX \$LV0 SKO WOX K OQ\$D >RO PSW a Y U a SR R_XN ON YP RO a Y WI VOKNSKQK 0 WKXKQO KXN ZOX \$YXP_XN a RY SMM/ZY K 0/=1 KXN M/ZY K 0 QY 0 XKXMO SKPY WK \$YX KXN K 0 WOX SKY ROS SKO WOX Z YMO 0 > RO a Y WI PY OWY S _0 PYW W_VSK \$YXKVM/ZY K \$YX Y PSKXM&KVSK S_ \$YX Y QY'0 XWOX KVY 0/E YX =_ KSKK/E \$M PY MON\$LV0 0/M/XN ZK C YZSK9YX YXQ OOX YM&K/KXN _ KSKL/0/LYXN PKWO a Y U 3K P OWK 0, YXN 3XS\$K S0 XKWON =_ KSKK/E \$M RO 6K Q0 +ZZ Y ON @D \$P\$O PY - 0 \$P\$ON - V\$WK 0, YXN PY RO RSN M/X 0M_S0 0/M/XN M/X 0M_S0 C0K 0Y WY 0 SXPY WK \$YX`S S a a _ _ KSKK/E \$M M/W

