

"  
O M D



" !"

"

ZI"1D@E; "VD@"J?; "JLL@C9>; : ">@"F; J: ; ?EDCL"V<Dc9">D; "B@KKA9C>R"@G": CEBCLF; E"DJS; "LJ?>CBAFJ?"  
?; EL@9ECQCFC>C; E"C9F; J?9C9OT">; JBDC90"J9: "FCSC90I"1D; C?"FCSC90"JGG; B>E"J9: "B@9: C>C@9E">D; C?"  
F; J: ; ?EDCLI"PR"SC?>A; "@G">D; C?"@GGCB; T">D; R"JFE@"E>J9: "C9"J"LJ?>CBAFJ?

Z"

"

A A



G A F C  
A G

[

&@K KCEEC@9XE"Sc; V"J9: "VD; 9"Sc; V; : "C9">D; "fOD>"@G"(BD; : Af; "" "@?"(BD; : Af; ")>@>D; "PJECE"@G  
69C@9T"V@AF: "DJS; "L?; S; 9>; : T"@?"VJE"fc\; FR">@DJS; "L?; S; 9>; : T"DCKdD; ?"G?@K"Q; B@Kc90"  
@?: Jc9; : "@?"B@K KCEEC@9; : T"VD; ?; "EABD"B@9: AB>"VJE"9@>: CEBf@E; : "QR">D; "Kc9CE>; ?"@?"&\$&O"  
>@>D@E; "?; EL@9ECQF; "G@?"JEE; EEC90"DCEdD; ?"BJ9: C: JBR"G@?"@?: C9J>f@9"@?"B@K KCEEC@9C90I"  
"

+IZI! "-9">D; "C9>; ?; E>E"Q@>D"@G">D; "Kc9CE>; ?"@?"&\$&O"JE">D; "BJE; "KJR"Q; "J9: "@G">D; "VD@f; "  
BDA?BDT">D; "\*CEBCLfC9J?R"#?@B; EE"@9B; "Q; OA9"ED@AF: "Q; "B@9: AB>; : "J9: "B@9BFA: ; : "JE"  
>L; : C@AEFR"JE"L@EECQF; T"B@9ECE>; 9>"VC>D">D; "L?@L; ?"B@9: AB>"@G">D; "L?@B; : A?; EI"  
"

+IZIZ"1@>DCE"; 9: T">D; "\*CEBCLfC9J?R"#?@B; EE"CKL@E; E">CK; "fCKC>E"G@?">D; "SJ?C@AE"E>; LE"VDCBD"  
DJS; ">@Q; ">J\; 9I"2@V; S; ?"C>"CE"; YAJFFR"C9">D; "C9>; ?; E>E"@G"JFF">DJ>; S; ?R"BJE; "VC>DC9">D; "  
\*CEBCLfC9J?R"#?@B; EE"@9B; "Q; OA9"ED@AF: "9@>"Q; "JQ@?>; : T: ; fJR; : "@?"DC9: ; ?; : "QR"J9"A9: AFR"  
9J??@V"@?"?; E>?CB>S; "JLLfCBJ>f@9"@G">D; ">CK; "fCKC>E"@?"C9: ; ; : "@G"J9R"@>D; ?"JEL; B>E"@G">D; "  
\*CEBCLfC9J?R"#?@B; EEI"  
"

+I["+BB@?: C9OFRT"VD; ?; "A9: ; ?">D; "L?@SCE@9E"@G">DCE"\*CEBCLfC9J?R"#?@B; EE"J9R"9@>CB; "EL; BCGC; E"  
J">CK; "fCKC>"G@?"J"B; ?>Jc9"JB>f@9">@Q; ">J\; 9"QR">D; "?; BCLC; 9>"J9: ">DJ>"JB>f@9"CE"9@>BJ??C; : "@A>"  
VC>DC9">D; ">CK; "EL; BCGC; : "C9">D; "9@>CB; ">@>D; "EJ>CEGJB>f@9"@G">D; "L; ?E@9"@?"Q@: R"E; 9: C90">D; "  
9@>CB; T">DJ>"L; ?E@9"@?"Q@: R"EDJFF"DJS; "J": CEB?; >f@9">@"JFF@V"J"?; JE@9JQF; "GA?>D; ?"L; ?C@: "G@?"  
EABD"B@K LfC9J9B; T"; <B; L>"JE"?; OJ?: E">D; "E>?CB">CK; "fCKC>"CKL@E; : "@9">D; "?COD">"@G"JLL; JF"  
A9: ; ?"#J?JO?JLDE"++IbI! T" I^I[I! "J9: "/I! "J9: "AL@9">D; "E>; LE">@Q; ">J\; 9"QR">D; "(R9@: "  
5@: ; ?J>@?"A9: ; ?"#J?JO?JLDE"++I! eIZI]"J9: "++I! eIZI^I"-9@>D; ?"BJE; ET"CG">D; "L; ?E@9"@?"Q@: R"  
E; 9: C90">D; "9@>CB; "B@9EC: ; ?E">DJ>"EAGGCBC; 9>">CK; "DJE"Q; ; 9"JFF@V; : "J9: ">D; "JB>f@9"?; YAC?; : "  
DJE"E>f@9">Q; ; 9"BJ??C; : "@A>"@?">D; ?; "DJE"Q; ; 9"J9"A9?; JE@9JQF; ; ; fJR"C9">D; "BJ??Rc90"@A>"@G"  
>D; "JB>f@9"MVd; >D; ?"@?"9@>">D; "\*CEBCLfC9J?R"#?@B; EE"CKL@E; E"J">CK; "fCKC>"G@?">D; "BJ??Rc90"@A>"  
@G">D; "JB>f@9NT">DJ>"L; ?E@9"@?"Q@: R"KJR"L?@B; ; : T"Q; J?C90"C9"Kc9: ">D; "9; ; : "G@?">D; "#?@B; EE"  
>@Q; "B@9: AB>; : "JE"; <L; : C@AEFR"JE"L@EECQF; I"  
"

>D; 9"09"; 0>D; ?"BJE; ">D; "EALLFR">@>DJ>"Q@: R"@G"EABD"090@?KJ>0@9"EDJFF"9@>"Q; ": ; ; K; : ">@"Q; "J"  
Q?; JBD"@G"B@900: ; 9>0JF0>R"A9: ; ?">D; "\*CEB0LF09J?R"#?@B; EEI"

"

+I^")@?>D; "LA?L@E; "@G">DCE"\*CEB0LF09J?R"#?@B; EET"J"?; G; ?; 9B; ">@"J9R"@G">D; "(; B>0@9E"+">@"U"  
09BFA: 090"(; B>0@9++"EDJFF"K; J9"J"?; G; ?; 9B; ">@">DJ>"(; B>0@9"09">D; "\*CEB0LF09J?R"#?@B; EE"J9: "  
>D; "G@ff@V090"V@?: E"J9: "; <L?; EE0@9E"BJ??R">D; "G@ff@V090"K; J9090E=3"

"

W+LL; JFE"&@K KCEE0@9X"EDJFF"K; J9">D; "&@K KCEE0@9"B@9E>0>A>; : "G@?">D; "D; J?090"@G"; JBD"  
+LL; JF"09"JBB@?: J9B; "V0>D"(; B>0@9"/I"

"

W+LL@09>; ?EX"EDJFF"K; J9T"G@?">D; "LA?L@E; E"@G">D; "JLL@09>K; 9>"@G"MN">D; "+EE; KQFR"

"

"  
&\$&OX"EDJFF"K; J9"J"L; ?E@9"VD@E; "9JK; "CE"@9">D; "\$@ff"@G"&DA?BD"\$; FJ>; : "&@KKA9C>R"  
O@?\; ?E"VD@"CE"A9: ; ?"B@9EC: ; ?J>C@9"V<>D<9">D; "\*CEBCLfC9J?R"#?@B; EE"MJ9: "E; ; "JFE@"  
#J?J0?JLD"+! eNI"  
"

W\* ; F; >C@9X"J9: "Wb@": ; F; >; X"EDJFF"K; J9">D; "?; K@SJF"@Gd>@"?; K@S; ">D; "9JK; "@G"J"K<9CE>; ?"@?"  
J"&\$&O"G?@K">D; "\$@ff"@G"5C9CE>; ?E"@?"&DA?BD"\$; FJ>; : "&@KKA9C>R"O@?\; ?E"JE">D; "BJE; "  
KJR"Q; "@>D; ?">DJ9"J">>D; "?; YA; E>"@G">D; "K<9CE>; ?"@?"&\$&O"B@9B; ?9; : "@?"QR">D; "  
JBB; L>J9B; "@G"DCEdD; ?"?; EC09J>C@9"@?"QR"DCEdD; ?": ; J>DI"  
"

W\* C?; B>C@9X"EDJFF"K; J9"J": C?; B>C@9d: C?; B>C@9E"VDCBD"J9"+EE; KQFR"&@K KCEEC@9"@?"+LL; JFE"  
&@K KCEEC@9"KJR"J: : ">@"J"O?C>>; 9"OJ?9C90"QR"VDCBD"Q": C?; B>E">D; "(R9@: "  
5@: ; ?J>@?d/; 9; ?JF"+EE; KQFR"\$; L?; E; 9>J>C\$; ">@"E; >"C9"K@>C@9"B; ?>J<9"E>; LE"V<>D"?; 0J?: "  
>@">D; "K<9CE>; ?d&\$&O">D; "EAQ; B>"@G">D; "BJE; I""")@?">D; "JS@C: J9B; "@G": @AQ>T"J"\*C?; B>C@9"  
BJ9"@9FR"Q; "CEEA; : "CG"JLL; 9: ; : ">@"J"V?C>>; 9"VJ?9C90"J9: "

(>J0; "M( ; B>@9"++N"B@Af: "9@>"; JE@9JQfR"; <L; B>">@?"; E>@?; ">D; "&DA?BDXE"L?@L; ?"  
B@9G@: ; 9B; "C9">DJ>"K@9CE>; ?!"

g/AC: ; fC9; E"@9"&@9: AB>"J9: "P; DJSc@A?g"EDJfF"K; J9">D; "/AC: ; fC9; E"@9"&@9: AB>"J9: "  
P; DJSc@A?"G@?"5@9CE>; ?E"@G"O@?: "J9: "(JB?JK; 9>E"J9: ">D; "/AC: ; fC9; E"@9"&@9: AB>"J9: "  
P; DJSc@A?"G@?"&\$&OE"J: @L>; : "QR">D; "/; 9; ?Jf"+EE; KQfR"@G">D; "&DA?BD"C9"UAFR"Ze! e"M@?"  
J9R"EAQE; YA; 9>"K@: @G@BJ>@9">D; ?; @GNI"

W2; J?C9OX"EDJfF"K; J9">D; "2; J?C90"B@9: AB>; : "QR">D; "+EE; KQfR"&@K K@EE@9"@?">D; "+LL; JfE"  
&@K K@EE@9"A9: ; ?"( ; B>@9"" "@?"( ; B>@9"/I"

W-9BJLJB@R"#?@B; : A?; X"EDJfF"K; J9">D; "#?@B; : A?; "@L; ?J>; : "QR">D; "69@; : "\$; G@?K; : "  
&DA?BD"G@?">D; "LA?L@E; "@G": ; JfC90"V@>D"BJE; E"C9S@fSc90">D; "C9BJLJB@R"@G"K@9CE>; ?E"@?"  
&\$&OE"J9: "B@9>J@9; : "C9"( ; B>@9"#"@G">D; "&DA?BDXE"5J9AJfI"

g-9@>Jf" &JA>@9g"EDJfF"K; J9"J9"-9@>Jf" &JA>@9"C@K@L@E; : "A9: ; ?"#J?J0?JLD"++I`I"

W-9@>Jf" 9YAC?R"EDJfF"K; J9">D; "; 9YAC?R"BJ??@; : "@A>": A?C90">D; "#?; 3&@K K@EE@9"(>J0; "QR"  
>D; "5J9: J>; : "/?@AL"C9"B@9\_A9B>@9"V@>D">D; "L; ?E@9"BJfC90"C9">D; "5J9: J>; : "/?@AL"  
A9: ; ?">D; "L?@SCE@9E"@G"( ; B>@9"P"

W-9S; E>@J>@9X"EDJfF"K; J9">D; "L?@B; EE"@G"C9S; E>@J>@9"BJ??@; : "@A>"QR">D; "5J9: J>; : "  
/?@AL"JE"E; >"@A>"C9"( ; B>@9"\*I"

W@C9>#J9; f"EDJfF"K; J9">D; "#J9; f?; G; ??; : ">@C9"#J?J0?JLD"PIZI[I]"

@?"L@E>"@?"DJE"J9R"09S@fS; K; 9>T"LJC: "@?"A9LJC: T"VD; ?; "EABD"Q@: R"@?"@?0J9CEJ>@9"V@AF: "  
DJS; "J"?; JE@9JQF; "J9: "L?@L; ?"; <L; B>J>@9"@G"Q; 090"KJ; ; "JVJ?; "@G">D; "LJ?>CBAFJ?"E>; LMEN"  
Q; 090">J\; 9"J9: d@?"J9R"OAC: J9B; "Q; 090"CEEA; : "A9: ; ?">D; "?; F; SJ9>"LJ?J0?JLD"@G">D; "  
\*CEBCLF09J?R"#?@B; EE"09"VDCBD">D; "; <L?; EEC@9"WP%A>EC: ; "%?0J9CEJ>@9X"JLL; J?EI"  
"

W#J?>C; EX"EDJFF"K; J9"MCN">D; "&@A9BCFT"VDCBD"0@?">D; "LA?L@E; "@G">D; "\*CEBCLF09J?R"#?@B; EE"EDJFF"  
JB">E@f; FR"J9: "; <BFAECS; FR">D?@AOD">D@E; "JLL@09>; : ">@"?; L?; E; 9>"0"D; ?; 09T"J9: "MCN">D; "  
K090E>; ?"@"&\$&OI"  
"

W#?; 3



W(L; BCF"+LL; JFE"P@: R"EDJFF"K; J9">D; "Q@: R"JLL@9>; : ">@D; J?"JLL; JFE"A9: ; ?"#J?J0?JLD"  
' I^I["J0J9E>"J"L?@L@E; : "?; G; ?; 9B; "QJB\"J9: "?; B@KK; 9: J>@9">@B@KK; 9B; ">D; "  
-9BJLJB@R"#?@B; : A?; I"

W(>?AB>A?; X"EDJFF"K; J9">D; "(>?AB>A?; "@G">D; "69@>; : "\$; G@?K; : "&DA?BDI"

W(AEL; 9E@9X"J9: "W@EAEL; 9: X"EDJFF"DJS; ">D; "K; J990E"JEE@9; : ">@>D; K"9"#J?J0?JLDE"["  
J9: "]"@G"(BD; : AF; "" ">@>D; "PJE@G"69@9"J9: ">D; ">D@?: "J9: "G@A?>D"LJ?J0?JLDE"@G"#J?>--"@G"  
(BD; : AF; ") ">@>D; "PJE@G"69@9I"

W(R9@: X"EDJFF"K; J9">DJ>"(R9@: "VDCBD"9"?; FJ>@9">@J9R"K9@>; ?"@?&\$&O"; <; ?BCE; E"  
@S; ?ECOD"@G">DJ>"K9@>; ?"@?&\$&O"9"JBB@?: J9B; "V@D"9"E"GA9B>@9"A9: ; ?"#J?J0?JLD"  
ZM]NM+NM<SN"@G">D; "(>?AB>A?; I"

g(R9@: "+LL@9>; ; E"EDJFF"K; J9">D; "L; ?E@9E"JLLE-3(? 2434)D; DJg"9(L)9E(F-8(9)4((9)4(1T)-Z(g(1T)-O2(

"

!e"

\*CEBCLF9J?R"#?@B; EET"Ĉ"EDJFF"Q; ">J\; 9"JE"Q; Ĉ90"; YAJFFR"?; Ġ; ?JQF; ">@J"&\$&O"@?>@>D; "\$@ff"@Ġ" &\$&OE"@?>@>D; "@GGĈB; "@Ġ"&\$&O"JE">D; "BJE; "KJR"Q; T"A9f; EE"EABD"B@9E>?AB>Ĉ@9"ĈE"L?; BFA: ; : " QR">D; "B@9>; <>I"

+I!!"1D; "&DA?BD"?; B@09ĈE; E">DJ>T"Ġ?@K">ĈK; ">@>ĈK; T"BJE; E"ĠJFFĈ90"VĈ>DĈ9">D; "\*CEBCLFĈ9J?R" #?@B; EE"KJR"J>>?JB>">D; "J>>; 9>Ĉ@9"@Ġ">D; "9J>Ĉ@9JF"@?F@BJF"L?; EE"J9: "@>D; ?"K; : ĈJ" @?0J9ĈEJ>Ĉ@9E"J9: "JA>D@?ĈE; E"(R9@: "5@: ; ?J>@?ET"+EE; KQFR"%GGĈB; ?E"J9: ">D; "(; B?; >J?R"@Ġ">D; "+EE; KQFR"&@KĈĈEĈ@9">@EALLFR">@>D; "#?; EE"%GGĈB; ?"EABD"Ĉ9Ĉ@?KJ>Ĉ@9"JE"EdD; "KJR" ?; JE@9JQFR"?; YAC?; ">@: ; JF"VĈ>D"JFF"L?; EEĈK; : ĈJ"; 9YAC?Ĉ; E"Ĉ9"J">JB>ĠAF"J9: ": ĈEB?; ; >"KJ99; ?"E@" JE">@L?@>; B>">D; "Ĉ9>; ?; E>E"@Ġ">D; "&DA?BDT">D; "KĈ9ĈE>; ?"J9: "JFF"@>D; ?E"Ĉ9S@fS; : "Ĉ9">D; "BJE; I"

+! ! `IZ"1D; "\*CEBCLF9J?R"?@B; EE"KJR"Q; "C9C>LJ>; : "C9"?; EL; B>"@G"J"K09CE>; ?"@?&\$&O"JE"J"?; EAF>"  
@G"J"?; B@K K; 9: J>@9"CEEAC90"G?@K">D; "-9BJLJBC>R"?@B; : A?; T"C9"VDCBD"BJE; ">D; ?; "KJR"Q; "J"  
ED@?>?>J9E>@9JF"@S; ?FJL"Q; >V; ; 9">D; "B@K K; 9B; K; 9>"@G">D; "\*CEBCLF9J?R"BJE; "J9: ">D; "  
B@9BFAE@9"@G">D; "BJE; "V<D>C9">D; "-9BJLJBC>R"?@B; : A?; I"

**AA C**

++! ! "1DC" (; B>@9"++>E; >E"@A>"J"&JA>@9"(>J0; "VDCBD"L?@Sc: ; E">D; "K; BDJ9CEK"VD; ?; QR"J9"  
; 9YAC?R"BJ9"Q; "E; >"AL">@; <JKC9; "KJ>>; ?E"@G"B@9B; ?9"C9S@fSc90"K09CE>; ?E"VDCBD"GF"ED@?>@G"  
/?@EE"5CEB@9: AB>Tf; J: C90T"CG"JLL?@L?L>; T">@"J9"-9C>LJF"&JA>@9"J9: "J")C9JF"&JA>@9"Q; C90"  
CEEA; : ">@>D; "K09CE>; ?"C9">D; "G@?K"@G"V?>>; 9"9@>@B; EI"

++! ! IZ"+9R"EABD"KJ>>; ?E"@G"B@9B; ?9"EDJFF"@9FR"GF"V<D>C9">D; "\*CEBCLF9J?R"?@B; EE"CG"  
: ; K@9E>J>@90"J": ; 0?; ; "@G"QFJK; V@?>D>C9; EE"J>>?CQA>JQf; ">@": ; fCQ; ?J>; "C9>; 9>"@?>@"J"QfJ>J9>"  
fJB\ "@G"BJ?; "J9: "B@9B; ?9T">D; ; GG; B>"@G"VDCBDT"CG"EAQE>J9>LJ>; : T"V@Af: "C9: CBJ>; "J"Q?; JBD"@G"  
>D; "B?>; ?LJ"JfC: : @V9"C9"#J?J0?JLD"+! ! I]I"-9">D; "JQE; 9B; "@G">D; E; ; f; K; 9>ET"9@B"BJE; "G@?"  
: CEBCLF9; "J?CE; E"A9: ; ?>DCE" (; B>@9"++>I"

++! ! I["-G"J">J9R">Ck; : A?C90">D; "&JA>@9"(>J0; ">D; "(R9@: "5@: ; ?J>@?"Q; B@K; E"JVJ?; "@G"J9R"  
C9C@?KJ>@9"EA00; E>C90">D; "L@EECCQfC>R"@G"/?@EE"5CEB@9: AB>"@9">D; "LJ?>"@G">D; "K09CE>; ?T"EdD; "  
EDJFF"DJS; ">D; "L@V; ?">@Q?C90">D; "&JA>@9"(>J0; ">@"J9"K K; : LJ>; "B@9BFAE@9"J9: "BJFF"C9"J"  
5J9: J>; : "0?@AL">@B@K K; 9B; "L>E"#?; 3&@K KCEE@9"(>J0; "C9"JBB@?: J9B; "V<D>C9" (; B>@9"PI"+9R"  
?; f; SJ9>C9G@?KJ>@9"Jf?; J: R"OJ>D; ?; : "V<D>C9">D; "&JA>@9"(>J0; "EDJFF"Q; "LJEE; : "@9">@>D; "  
5J9: J>; : "/?@AL"J9: ">D; "(R9@: "5@: ; ?J>@?"EDJFF: CEBDJ?0; ">D; "(R9@: "+LL@C9>; ; E"G?@K"J9R"  
GA?>D; ?"?; EL@9ECCQfC>RI"

++! ! I]I! "\$; G; ?; 9B; E"C9">DCE" (; B>@9"++>@>D; "(R9@: "5@: ; ?J>@?"BJ9"JfE@Q; ">J\; 9"JE"J"  
?; G; ?; 9B; ">@>D; "/; 9; ?Jf"+EE; KQFR"\$; L?; E; 9>J>C>S; T; <B; L>"VD; ?; "L?; BfA: ; ; "QR">D; "B@9>; <>I"

++! ! I]IZ"+f"V?>>; 9"9@>@B; E"?; YAC?; : ">@Q; "OCs; 9"QR">D; "(R9@: "+LL@C9>; ; E">@>D; "(R9@: "  
5@: ; ?J>@?"J9: d@?>D; "K09CE>; ?"A9: ; ?>D; "L?@SC@9E"@G">DCE" (; B>@9"++>EDJFF"e; >"@A">D; "  
?; JE@9E"G@?>D; "OCsC90"@G"EABD"9@>@B; I"

++! ! I^I! "+B>C90"C9"JBB@?: J9B; "V<D>C9"#J?J0?JLD"+! ! I^IZT"; JBD"(R9@: "EDJFF"JLL@C9">V@"  
L; ?E@9E"MN@V9"JE"f>D; "(R9@: "+LL@C9>; ; Efn">@B@9: AB>">D; ; 9YAC?R"A9: ; ?>D; "&JA>@9"(>J0; "  
J9: ">@>J\; "EABD"@>D; ?"JB>@9E"JE"J?; ?"; YAC?; : "A9: ; ?>DCE" (; B>@9"++>J9: ">V@L; ?E@9E">@"JB">  
JE"?; E; ?S; E"CG@?"EABD"LA?L@E; E"ED@Af: ">D; "L?C9BC>LJF"JLL@C9>; ; E"Q; "A9JQf; "G@?"VDJ>; S; ?"  
?; JE@9">@"JB">C9">DJ>"BJLJBC>R"C9"J" LJ?>CBAFJ?"BJE; I"

++! ! I^IZ"1D; "5@: ; ?J>@?"@G">D; "(R9@: "C9"B@9EAF>J>@9"V<D>EABD"%GGCB; ?E"@G">D; "(R9@: "JE"EdD; "  
B@9EC: ; ?E"JLL?@L?L>; "EDJFF"G@?>DV<D>JLL@C9">V@L; ?E@9E">@"JB">JE">D; "(R9@: "+LL@C9>; ; E"  
MJ9: ?; E; ?S; EN"C9"J9R" LJ?>CBAFJ?"BJE; "C9">D; "G@ff@V<C90"KJ99; ?="MQN"EdD; "EDJFF"JLL@C9">D; "CG?E">  
@G">D; "(R9@: "+LL@C9>; ; E"G?@K">D; "U@C9">#J9; f"MV<D>J9@>D; ?"G?@K">D; "U@C9">#J9; f">@"JB">JE"  
?; E; ?S; N"J9: "MQN"EdD; "EDJFF"JLL@C9">JE">D; "E; B@9: "(R9@: "+LL@C9>; ; "@9; "@G">D; "G@ff@V<C90">DJ>  
CE="MJN"@9; "L; ?E@9"G?@K"l>E"@V9"(R9@: "#J9; f"@?"(DJ?; : "(R9@: "#J9; f"@?"MQN"@9; "L; ?E@9"G?@K"  
>D; "(R9@: "#J9; fMEN"@G"J9@>D; ?"ER9@: "@?>D; "(DJ?; : "(R9@: "#J9; f"@G"J9@>D; ?"O?@AL"@G"(DJ?C90"

>D; "69<; : "\$; G@?K; : "&DA?BD"V<D"F; 0JFF">?QA9JF"@?">D; ?"JLL?@L?L>; "L?@G; EE@9JF"  
; <L; ?C; 9B; I"(dD; "EDJFF"JFE@JLL@C9>"C9">D; "EJK; "KJ99; ?"@9; "L; ?E@9">@JB>"JE"?; E; ?S; ">@">D; "  
E; B@9: "(R9@: "+LL@C9>; ; "MQA>"E; ; "#J?JO?JLD"++I! I^I^NI"OD; 9"KJ\C90"JLL@C9>K; 9>E"A9: ; ?"  
MCCNMQN"JQ@S; T">D; "5@: ; ?J>@?"@G">D; "(R9@: "EDJFF"C9">D; "BJE; "@G"J"EC90F; "(R9@: "#J9; FT"C9G@?K"  
>D; "5@: ; ?J>@?"@G">DJ>"(R9@: "@G"EABD"JLL@C9>K; 9>"J9: T"C9">D; "BJE; "@G"J"(DJ?; : "(R9@: "#J9; FT"  
C9G@?K">D; "&@3@?: C9J>@?"@G">DJ>"#J9; F"@G"EABD"JLL@C9>K; 9>T"VD; >D; ?"C"J?CE; E"A9: ; ?"MCCNMJN"@?"  
MCCNMQN"JQ@S; T"J9: ">D; "&@3@?: C9J>@?"EDJFF"C9">A?9"C9G@?K">D; "5@: ; ?J>@?"@G">D; "(DJ?C90"(R9@: E"  
C9">DJ>"/?@ALI"  
"

++I! I^I["-G"J9R"K; KQ; ?"@G"J"(R9@: "#J9; F"@?">D; "U@C9">#J9; F"CE"J"K; KQ; ?"@G"J"FB@BJF"BDA?BD"  
B@99; B>; "V<D">D; "BJE; "@?DJE"J9R"lje>@?JF"@?"L; ?E@9JF"C9S@fS; K; 9>"C9">D; "BJE; "@?CE">D; "  
EAQ; B>"@G"J": CEBCLfC9J?R"B@KLFJc9>T">DJ>"L; ?E@9"EDJFF"9@>"Q; "@9; "@G">D; "(R9@: "+LL@C9>; ; E"G@?"  
>DJ>"BJE; I"  
"

++I! I^I]"-9">D; "; S; 9>">DJ>"@9; "@G">D; "(R9@: "+LL@C9>; ; E"CE"@QfC0; : ">@V<D: ?JV": A?C90">D; "  
&JA>@9"(>JO; T">D; "?; E; ?S; "JLL@C9>; : "G?@K">D; "EJK; "#J9; F"KJRT"EAQ; B>">@">D; "JLL?@SJF"@G"  
>D; "5@: ; ?J>@?"@G">D; "(R9@: "G@ff@V<C90"B@9EAF>J>@9"V<D"EABD"@GGCB; ?E"@G">D; "(R9@: "JE"EdD; "  
B@9EC: ; ?E"JLL?@L?L>; T">J\; "@S; ?"DCEdD; ?"L@E<@9"J9: T"@C9>fR"V<D">D; "@>D; ?"(R9@: "  
+LL@C9>; ; T"B@9>C9A; "V<D">D; "; 9YAC?RT"@C9"C9"CEEA"C90"&JA>@9E"MG"B@9EC: ; ?; : "9; B; EEJ?RN"J9: "  
Q?C90">D; "&JA>@9"(>JO; ">@C">E"B@9BFAEC@9I"(D@AF: ">D; "5@: ; ?J>@?"@G">D; "(R9@: T"G@ff@V<C90"EABD"  
B@9EAF>J>@9"JE"e>J>; : "JQ@S; T"B@9EC: ; ?>DJ>"C"V@AF: "9@>"Q; "JLL?@L?L>; "C9">D; "BJE; "  
B@9B; ?9; : ">@J: @L>; C>D; ?">D; "L?@B; : A?; "@A>fC9; : "JQ@S; "@?">D; "L?@B; : A?; "E; >"@A">"C9"  
#J?JO?JLD"++I! I^I^T"EdD; "Vff": CEBDJ?0; ">D; "(R9@: "+LL@C9>; ; E"J9: "JLL@C9">"V@9; V"@9; E"C9"  
JBB@?: J9B; "V<D">D; "JQ@S; "L?@B; : A?; I"  
"

++I! I^I^(D@AF: ">D; ?; "Q; "J"SJBJ9BR"VDCBD"CE"?; YAC?; : ">@Q; "GcFF; : "QR"JLL@C9>K; 9>"G?@K">D; "

Œ9ŒŒJ>; ">D; "&JA>Œ@9"(>J0; "Œ9"?; FJ>Œ@9">@J9R"LJ?>ŒBAFJ?"KŒ9ŒE>; ?T"EdD; "EDJFF"Œ@FF@V">D; "

09"VDCBD"BJE; "#J?JO?JLD"PI`I["JLLf; EI"""+FE@>D; "09<J>@9"@G">D; "&JA>@9"(>JO; "Vff"9@>  
9@?KJFFR"09S@fS; ">D; "EAEL; 9E@9"@G">D; "K09CE>; ?!"

"

++IZIa"-9"LA?EAC90">D; 0?"; 9YAC?R"09"J"BJE; "?; G; ??; : ">@>D; K"A9; : ?">D; "#J?JO?JLD"PIbI]"  
L?@B; : A?; T">D; "(R9@: "+LL@09>; ; E"EDJFF"DJS; "9@: 0?; B>"L; ?E@9JF"B@9>JB>"@G"J9R"\09: "V0D"J9R"  
K; KQ; ?"@G">D; "5J9: J>; : "/?@AL"09">DJ>"BJE; I"

"

++IZIb">+"JFF"K; ; >09E"V0D">D; "(R9@: "+LL@09>; ; ET">D; "K09CE>; ?"J9: "J9R"@>D; ?"L; ?E@9E"  
09>; ?S0; V; : "QR">D; "(R9@: "+LL@09>; ; E"KJRT"0G">D; R"VCEdT"Q; "JBB@KLJ90; : "QR"J"0?0; 9: I"

"

++IZIc"1D; "09<J>@9"@G">D; "&JA>@9"(>JO; "Vff"9@>"9@?KJFFR"09S@fS; ">D; "EAEL; 9E@9"@G">D; "  
K09CE>; ?!"

"

++IZI! e"&JE; E"Q; 090"B@9EC; : ?; : "QR">D; "(R9@: "+LL@09>; ; E"JG>; ?"?; G; ??JF"A9; : ?">D; "#J?JO?JLD"  
PIbI]"L?@B; : A?; "EDJFF"Q; "EAQ; B>">@>D; "L?@SCE@9E"@G">DCE"(: B>@9"+09">D; "EJK; "KJ99; ?"JE"  
@>D; ?"BJE; ET"EJS; "@9FR"JE"?; OJ?: E"J9R": 0G; ?; 9B; E"K; 9>@9; : "09"J9R"@G">D; "L?; B; : 090"EAQ3  
LJ?JO?JLDE"@G">DCE"#J?JO?JLD"++IZI"

++I["1D; "LA?L@E; "@G">D; "; 9YAC?R"CE">@; E>JQfCED"VD; >D; ?"09">D; "@L090@9"@G">D; "(R9@: "  
+LL@09>; ; ET">D; "KJ>>; ?E"@G"B@9B; ?9"?; G; ??; : ">@09"#J?JO?JLD"++IZI]T"VDCfE">D; R"KJR"GJFF"  
ED@?>"@G"/?@EE"5CEB@9: AB>T": @"9@9; >D; F; EE"JK@A9">@J"GJfA?; "@9">D; "LJ?>"@G">D; "  
K09CE>; ?d&\$&O">@fCS; "AL">@>D; "L?@KCE; E"VDCBD"EdD; "KJ; : "J">@?: 09J>@9dB@K KCE@09090"  
ME; ; "#J?JO?JLD"+I! I]"J9: "VD; >D; ?"0G">D; "(R9@: "+LL@09>; ; E": @B@K; ">@>DJ>"B@9BFAE@9"0">  
V@Af: "Q; "JLL?@L?J>; "G@?>D; K">@CEEA; "J"&JA>@9"09">D; "G@?K"@G"J"V?0>; 9"9@0B; ">@>D; "  
K09CE>; ?"J9: T"0G"E@T"09"VDJ">; ?KE"@T"0G">D; R"B@9EC; : ?">D; "BJE; "K@?; "E; ?@AET"VD; >D; ?">@"  
?; B@KK; 9: ">@>D; "(R9@: "5@: ; ?J>@?>DJ>"EdD; "ED@Af: ">J\; ">D; "BJE; "@9>@>D; "9; <"E>JO; "@G"  
>D; "\*CEBCLf09J?R"#?@B; EE"QR"BJFF090"09"J"5J9: J>; : "/?@AL"A9; : ?"(: B>@9"PI"

"

++I]I!"1D; "(R9@: "+LL@09>; ; E"Vff"DJS; : 0EB?; >@9"JE">@>D; "KJ99; ?"09"VDCBD">D; R"B@9: AB>"  
>D; 0?"; 9YAC?R"09">D; "fCOD">@G">D; "B0?BAKE>J9B; E"@G">D; "BJE; I"2@V; S; ?"JE"J"0; 9; ?JF"?AF; ">D; "  
G@ff@V090"E>; LE"ED@Af: "Q; ">J\; 9="

"

++I]I!!"1D; "(R9@: "+LL@09>; ; E"ED@Af: "J">D; "; J?f; E>"L@EE0f; "E>JO; "09">D; 0?"; 9YAC?R"E; ; \ "J"  
K; ; >090"V0D">D; "K09CE>; ?!"

"

++I]I! IZ">@>D; "@A>E; >"@G">DJ>"K; ; >090">D; "(R9@: "+LL@09>; ; E"ED@Af: "; <LJf09">DJ>">D; "  
LA?L@E; "@G">D; "K; ; >090"CE">@?JCE; "V0D">D; "K09CE>; ?">D; "B@9B; ?9E"E; >"@A">09">D; "E>J>; K; 9>"  
?; G; ??; : ">@09"#J?JO?JLD"++IZI]"J9: ">@KJ\; "Bf; J?>DJ>">D; "@A>B@K; "KCOD">Q; ">D; "CEEA; "@G"J"  
&JA>@9"@?&JA>@9E"@?"; S; 9"MG">D; "(R9@: "+LL@09>; ; E"SC; V; : ">D; "KJ>>; ?"JE"EAGGCBC; 9>fR"  
E; ?@AE"J9: "V0D@A">CEEA090"J9R"BJA>@9E"J"?; B@KK; 9: J>@9">@>D; "(R9@: "5@: ; ?J>@?>@BJFF"  
09"J"5J9: J>; : "/?@AL"J9: ">DAE">J\; ">D; "KJ>>; ?": 0?; B>fR"@9">@>D; "9; <"E>JO; "@G">D; "  
\*CEBCLf09J?R"#?@B; EEI"

"

"

B@9B; ?9"J9: "JE">@D@V">D; "L?@QF; KE"ED@AF: "Q; "?; E@fS; : l"-G">D; "K@9CE>; ?"CE"B@3@L; ?J>fS; "J9: "J0?; ; E">@">D; "JBBA?JBR"J9: "SJfC: f>R"@G">D; "B@9B; ?9E"; <L?; EE; : "QR">D; "(R9@: "5@: ; ?J>@?T">D; "(R9@: "+LL@f9>; ; E"KJR"V; ff"G; ; f"JQf; ">@"@Kf">D; "E>; LE"EA00; E>; ; "



++I^I[IZ"(D@AF: ">D;"(R9@: "5@: ; ?J>@?"Q; "A9VffC90">@"JBB; L>">DCE"?; B@K K; 9: J>C@9T"EdD; "  
KJR"V<D<C9">V@"K@9>DE"@G"?; B; GL>"@G">D; C?"9@>CB; "OCS; ">@"; JBD"@G">D; "(R9@: "+LL@C9>; ; E"  
V?C>; 9"9@>CB; "?; YA; E>C90">D; K">@"B@9>C9A; "V<D">D; C?"; 9YAC?R"J9: T"CG">D; R"JBB; ; ; ">@">DCE"  
?; YA; E>T">D; R"Vff"L?@B; ; : "V<D">D; "?; KJ<9: ; ?"@G">D; "&JA>C@9"(>J0; "C9"JBB@?: J9B; "V<D">DCE"

++I` IZIZ"1D; "K(C9CE>; ?"DJE">D; "?OD">@"JLL; JF"JOJC9E">D; "CKL@E@9"@G"J9"-9C>JF"&JA>@9"  
CEEA; : "A9: ; ?"#J?JO?JLD"++I` I! "J9: ">D; "JLL; JF"L?@SCE@9E"J?; "B@9>JC9; : "C9"#J?JO?JLD"++IbI"  
"

++I` I[ I! "\* A?C90">D; "L; ?@: "VDCFE">D; "-9C>JF"&JA>@9"CE"9"LFJB; T">D; "(R9@: "+LL@C9>; ; E"EDJFF"  
\; ; L">D; "E@AJ>@9"A9: ; ?"?; S@; V"J9: T"CG">D; R"Q; B@K; "JVJ?; "@B@9: AB>@"?Q; DJS@A?"@9">D; "  
LJ?>@">D; "K(C9CE>; ?"VDCBD"9: CBJ>; E">DJ>"EdD; "CE"9@>"J: D; ?C90">@">D; ">; ?KE"@G">D; "&JA>@9T"  
>D; R"DJS; ">D; "JA>D@?@R">@"BJFF">D; "K(C9CE>; ?">@"JBB@A9>"J>"J9R">CK; "J9: T"CG">D; "BC?BAKE>J9B; E"  
ED@AF: "E@"?; YAC?; T">@"CEEA; "J")C9JF"&JA>@9"A9: ; ?"#J?JO?JLD"++Ia"@?"QRLJEE">D; ")C9JF"&JA>@9"  
(>JO; "J9: ">@"L?@B; ; ; "



ED@Af: "E@"?; YAc?; T">"CEEA; "J"?; B@K K; 9: J>@9">@>D; "(R9@: "5 @: ; ?J>@?"C9">D; ">; ?KE"@G"  
#J?JO?JLD"++I^I[I! "V<>D@A>"VJ<>90"G@?">D; "L; ?@: "@G">D; "&JA>@9">@"; <L?; T"C9"VDCBD"BJE; "  
L?@B; ; A?; E"J9Jf@0@AE">@>D@E; "B@9>Jc9; : "C9"#J?JO?JLDE"++I^I[IZ"J9: "++I^I[I["VcFF"JLLFR"  
"  
++IaI[IZ"1D; "L?@SCE@9E"@G"#J?JO?JLD"++I]"JE">@>D; "B@9: AB>@G"K; ; >C90E"V<>D">D; "Kc9cE>; ?"  
J9: "@>D; ?"C9>; ?Sc; V; ; E"EDJfF"JfE@"JLLFR": A?C90"J9: "J">D; "; <L?J>@9"@G">D; "L; ?@: "@G">D; "



++lb

ZZ"

"

"

"

Z["

?; L@?>">@>D; "(R9@: "5@: ; ?J>@?"c9"JBB@?: J9B; "Vc>D">D; "L?@B; : A?; "E; >"@A>"c9"#J?J0?JLD"  
++lcl! l"1D; "(R9@: "5@: ; ?J>@?"EDJff"DJS; "



"

Z^"

"

PIZIZI[" S; ?R"0?@AL"@6"(DJ?090"(R9@: E"EDJFF"JLL@9>"J"&@3@?: 09J>@?"MVD@"KJR"JFE@"Q; "J"#J9; F"  
K; KQ; ?N"VD@"EDJFF"B@3@?: 09J>; "J9: "J: K090E>; ?">D; 0"(DJ?; : "(R9@: "#J9; FT"\; ; L"AL

Z`"

"

>DCE"J9: T"CG"9; B; EEJ?RT">@"?; K(9: ">D; "0?@AL"VD; 9">D; "9AKQ; ?"GJFFE"Q; F@V">D; "E>J>; : "  
?; YAC?; K; 9>I"  
"

PI [I! "-9": CEBCLF9J?R"BJE; E"J?CEC90"A9: ; ?"#J?JO?JLD"ZM]NM+NM<SCCN"@G">D; "(>?AB>A?; "M(R9@: EN"CG"  
?; EL; B>@"G"J9R"K(9CE>; ?"CG"K; KQ; ?EDCL"@?"A9: ; ?">D; "JA>D@?>R"@G">D; "(R9@: "CG"YA; E>@9T"CG"  
>D; "5@: ; ?J>@?"@G">DJ>"(R9@: "; G>D; ?"MCN"Q; FC; S; E">DJ>">D; ?; "KJR"Q; "J": CEBCLF9J?R"CEEA; "  
C9S@fSC90"/?@EE"5CEB@9: AB>@"?KCEB@9: AB>@"G"J"EAGGCBC; 9>FR"E; ?@AE"9J>A?; "JE">@"\_AE>CGR"  
DCEdD; ?>J\C90"JB>@9"A9: ; ?>DCE"#J?JO?JLD"VGD@A>"GC?E>"CG>GJ>CG0">D; "&JA>@9"(>J0; "@?"MCN"  
?; E@fS; E"MVd; ?; ">D; "BJE; "DJE"Jf?; J: R"LJEE; ; ">D?@AOD">D; "&JA>@9"(>J0; N">@"JB">@9">D; "  
?; B@K K; 9: J>@9"G?@K">D; "(R9@: "+LL@G>; ; E">@"BJFF"CG"J"5J9: J>; ; "/?@ALT"EdD; "EDJFF"  
G@?>DVGD"CG">D; "9JK; "@G">D; "(R9@: "JLL@G>">V@L; ?E@9E"G?@K">D; "U@CG>"#J9; F"JE"L?@Sc: ; : "CG"  
#J?JO?JLD"PIZI["J9: "@9; "L; ?E@9"G?@K">D; "(R9@: "#J9; F"@?"(DJ?; : "(R9@: "#J9; F"M@?"CG"J9"  
; K; ?0; 9BR"G?@K">D; "(R9@: "#J9; F"@?"(DJ?; : "(R9@: "#J9; F"@G"J9@>D; ?"(R9@: "@?"/?@AL"@G"  
(DJ?CG0"(R9@: EN"JE"L?@Sc: ; : "CG"#J?JO?JLD"PIZI! "@?"#J?JO?JLD"PIZIZ">@"B@9E>A>; ">D; "  
5J9: J>; ; "/?@AL"G@?">D; "LJ?>CBAFJ?"BJE; I""1D; "(R9@: "5@: ; ?J>@?"KJR": ; LJ?>"G?@K">D; "E>?CB>  
>; ?KE"@G">D; "L?; B; ; CG0"E; 9>; 9B; "CG"EdD; "B@9EC: ; ?E">DJ>"J9R": ; FJR"CG"KJ\C90"J9"JLL@CG>K; 9>  
G?@K">D; "(R9@: "#J9; F"@?"(DJ?; : "(R9@: "#J9; F"V@Af: "A9: AFR?; >J?: ">D; "L?@0?; EE"@G">D; "BJE; "  
J9: "CG"EABD"J"E@AJ>@9"EdD; "KJR"JLL@CG">D; ">DC?: "K; KQ; ?"@G">D; "5J9: J>; ; "/?@AL"G?@K">D; "  
U@CG>"#J9; F" ""+E"E@9"JE">D; "JLL@CG>K; 9>E"DJS; "Q; ; 9"KJ; ; T">D; "(R9@: "5@: ; ?J>@?"EDJFF"  
CG@?K">D; "KCGCE>; ?"@G">DCE"J9: "G@ff@V">D; "L?@B; ; A?; "fJc: ": @V9"CG"#J?JO?JLDE"PI !I! d]I"

"

"

Zb"

PI` I["-G">D; "(R9@: "5@: ;?J>@"DJE"L?@B; ; ; ; : " : C?; B>fR">@"











&! I ^"-9G@?K">D; "/; 9; ?JF"(; B?;>J?RT">D; "5@: ; ?J>@"@G">D; "(R9@: T">D; "(R9@: "&F; ?\T">D; "#?; EE"  
%GGCB; ?T">D; "(JG; OAJ?: C9O"%GGCB; ?"J9: ">D; "(; B?;>J?R"G@?"5C9CE>?C; E"@G">D; "?; B; CL>"@G">D; "  
\$; G; ??JF". @>CB; "QA>"9@>"@G">D; "B@9>; 9>E">D; ?; @G"JLJ?>"G?@K">D; "9JK; "@G">D; "K9CE>; ?I"  
"

&! I `"%9"?; B; CL>"@G">D; "K9CE>; ?\E"?; EL@9E; "A9: ; ?"#J?JO?JLD"&! IZ"J9: "J9R": @BAK; 9>E"VDCBD"  
KJR"JBB@KLJ9R"l>"L?@SC: ; ">D; "5J9: J>; : "/?@AL"Vl>D"B@LC; E">D; ?; @GI"  
"

&! Ia"-9"J9R"BJE; "J?CEC90"JE"J"B@9E; YA; 9B; "@G"J". @>CB; "@G"\$; G; ?; 9B; "QJB\T"VD; ?; "B@KK; 9>E"  
J?; "?; B; CS; : "G?@K"; l>D; ?"@G">D; "LJ?>C; E"JE"J"?; EAF>"@G">D; "C9S<J>l@9"B@9>Jl9; : "C9"#J?JO?JLD"  
&! I [T"L?@SC: ; ">D; "@>D; ?"LJ?>R"Vl>D"B@LC; E">D; ?; @GI"  
"

EdD; "CE"A9JVJ?; "@G"J9R"BC?BAKE>J9B; E"VDcBD"t9">D; "L?; E; 9>"BJE; "KcOD>"L?; S; 9>"DcKdD; "?G?@K"  
E; ?S?90"@9">D; "+EE; KQFR"&@K KCEEC@9I"  
"

&I]IZ"1D; "-9S<; ; "EDJFF"V<Dc9"a": JRE"@G"?; B; cL>@"G"EABD". @>CB; "E; ?S; "@9">D; "(; B?; >J?R"@G">D; "  
+EE; KQFR"&@K KCEEC@9J". @>CB; "t9: cBJ>c90"VD; >D; ?"EdD; "CE"JQF; "J9: "VcFFc90">@JBB; L>"  
JLL@c9>K; 9>"J9: T"CG"E@T"B@9Gc?Kc90"B@K LfcJ9B; "V<D"#J?J0?JLD"&I[! !"  
"

&I^I!"1D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEEC@9"EDJFF"E; ?S; "9@>CB; "@9">D; "#J?>c; E"E; >>c90"@A>"  
>D; "9JK; "J9: "@GcCB; "@?"B?; ; ; 9>JFE"@G"; JBD"L?@L@E; ; "JLL@c9>; ; T": ?JVc90"J>>; 9>[c9">@"  
#J?J0?JLDE"&I[! ! "J9: "?; YAc?c90"9@>CB; "@G"@Q; B>[c9">@J9R"@G">D; "L?@L@E; ; "JLL@c9>; ; E"A9: ; ?"  
>DJ>"#J?J0?JLD">@Q; "E; ?S; ; "AL@9">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEEC@9"V<Dc9"! ]": JRE"  
@G">D; "E; ?S?CB; "@G">D; ". @>CB; "OcS; 9"A9: ; ?">DcE"#J?J0?JLDI"  
"

&I^I]"1D; "+9R"EABD". @>CB; "@G"%Q; B>[c9"KAe">E>J>; ">D; "O?@A9: E"G@?"EABD"@Q; B>[c9I"  
"

&I^I["1@; 9EA?; ">DJ>">D; "&@K KCEEC@9"(>J0; "CE"K@S; ; "Jf@90"t9"J">cK; FR"KJ99; ?T"J9R". @>CB; "@G"  
%Q; B>[c9"?; B; cS; ; "@A>Ec; ; ">D; "L; ?c@: "Jff@V; ; "VcFF"9@>"9@?KJffR"Q; "B@9Ec; ; ?; ; "A9f; EE"S; ?R"  
O@@: "?; JE@9"BJ9"Q; "ED@V9"G@?"c>E"tJ>; "; ; fCS; ?RI"  
"

&I^I]"1D; "+LL@c9>; ?E"EDJFF"B@9Ec; ; ?"J9R"@Q; B>[c9"L?@L; ?FR": ; fCS; ?; ; "J9: "EDJFF": ; Bc; ; "  
VD; >D; ?">@ALD@f: "@?"; ; B>">D; "@Q; B>[c9I"  
"

&I^I^-G">D; R"?; ; B>">D; "@Q; B>[c9">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEEC@9"EDJFF"E; ?S; "  
9@>CB; ">D; ?; @G"@9">D; "@Q; B>@?"  
"

&I^I^-G">D; R"ALD@f: ">D; "@Q; B>[c9T">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEEC@9"EDJFF"E; ?S; "  
9@>CB; ">D; ?; @G"AL@9">D; "@Q; B>@?T">D; "L; ?E@9">@VD@K">D; "@Q; B>[c9"VJE">J\; 9"J9: ">D; "  
"

EDJFF"E>J9: ": @V9"J9: "Q; ": @BDJ?0; : "J9: "J"9; V"+EE; KQFR"&@K KCEEC@9"EDJFF"Q; "JLL@C9>; : "  
A9: ; ?">DCE"(; B>C@9"&I"  
"

&Ial]"-G">D; "&@9S; 9; ?"@G">D; "+EE; KQFR"&@K KCEEC@9"CE"A9JQF; ">@B@9>C9A; ">@E; ?S; T">D; "  
?; KJ@C9C90"K; KQ; ?E"EDJFF"G@FF@V@C90"B@9EAF>J>C@9"V@D">D; "+LL@C9>; ?ET"JLL@C9>@9; "@G">D; C?"  
9AKQ; ?">@Q; ">D; "&@9S; 9; ?"C9"DCEdD; ?"LFJB; I"  
"

**D I M G**

\*I! "->"EDJFF"Q; ">D; "?@f; "@G">D; "5J9: J>; : "/?@AL">@C9S; E>C0J>; ">D; "KJ>>; ?E"VDCBD"J?; ">D; "  
EAQ; B>@G">D; "\$; G; ??JF". @>CB; "V@D"J"SC; V">@L?; E; 9>C90">D; "BJE; "C9">D; "9JK; "@G">D; "&@A9BCF"  
J">D; "2; J?C90I"  
"

\*IZI! "-9">D; "B@A?E; "@G">D; "-9S; E>C0J>C@9T">D; "5J9: J>; : "/?@AL"EDJFF"9@?KJFFR"C9>; ?SC; V">D; "  
L; ?E@9"@?L; ?E@9E"@"@: 0C90">D; "C9C>JF"B@KLFJ@9>"MCG"J9RN"J9: ">D; "K@C9CE>; ?"B@9B; ?9; : "J9: "EDJFF"  
KJ\; "JFF"@>D; ?"C9S; E>C0J>C@9E"VDCBD"@"B@9EC: ; ?E"9; B; EEJ?RI"  
"

\*IZIZ"+9R"L; ?E@9"Q; C90"C9>; ?SC; V; : "C9"JBB@?: J9B; "V@D"#J?J0?JLD"\*IZI! "KJRT"CG"EdD; "E@"  
V@ED; ET"DJS; "J"G?C; 9: "L?; E; 9>"V@D"D@KdD; ?"J">EABD"C9>; ?SC; VI"  
"

\*I["-9"B@9: AB>C90"@"E"-9S; E>C0J>C@9"J9: "L?; LJ?C90"@"?>D; "2; J?C90T">D; "5J9: J>; : "/?@AL"EDJFF"  
J>"JFF">C@K; E"DJS; "C9"K@C9: ">D; "E>J>; K; 9>"E; ">@A>"C9"#J?J0?JLD"+IZI! "?; 0J?: C90">D; "L?@L; ?"  
; <L; : C@C@9"@G">D; "\*CEBCLFC9J?R"#?@B; EE"MU9: "E; ; "JFE@"#J?J0?JLD" I] "JE">@>D; "?@f; "@G">D; "  
(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEEC@9"C9">DCE"?; EL; B>NI"  
"

\*I]"-9"BJE; E"VD; ?; "#J?J0?JLD" Ial! "JLLfC; ET">D; "5J9: J>; : "/?@AL"KJR"@"E; fG"K@9C@?>D; "  
B?C@K@9JF"L?@B; ; : C90ET"QA">EDJFF"@>D; ?V@E; "G@?">D; "L; ?C@: "EL; BCGC; : "C9">DJ>"#J?J0?JLD"EAEL; 9: "  
C@E"@V9"C9S; E>C0J>C@9"@G"J9R"KJ>>; ?"A9: ; ?">D; "\*CEBCLFC9J?R"#?@B; EE"VDCBD"K@C0D">"JFE@"Q; "  
?; fJ>; : ">@>D; "B?C@K@9JF"L?@B; ; : C90EI"  
"

\*I^"-9"BJE; E"B@K@C90"C9>@>D; "\*CEBCLFC9J?R"#?@B; EE"@"@FF@V@C90"J"?; B@K K; 9: J>C@9"@"K">D; "  
-9BJLJBC@R"#?@B; : A?; T">D; "5J9: J>; : "/?@AL"EDJFF"DJS; "?; 0J?: ">@>D; "G@FF@V@C90"KJ>>; ?E"  
"

\*I^I! "1D; "5J9: J>; : "/?@AL"KAE">BJ??R"@A>"@"E"-9S; E>C0J>C@9"GAFFR"J9: "KAE">9@>?; fR"AL@9"J9R"  
C9C@?KJ>C@9"EC@KLF"Q; BJAE; "C@VJE"L?; E; 9>; : "J9: "B@9EC: ; ?; : "V@D@C9">D; "-9BJLJBC@R"  
"



LJE>@?J>; "@G">D; "?; K@SJF"@G">D; "K@9CE>; ?XE"(AEL; 9E@9"JE"EL; BCGG; : "C9"#J?J0?JLD"Plal^"J9: "MCCN"  
C9E>?AB>"DCkDd; ?">"OCs; "V?>; 9"9@>B; "@G">D; "?; K@SJF"@G">D; "K@9CE>; ?XE"(AEL; 9E@9">@">D; "  
L; ?E@9E"EL; BCGG; : "C9"#J?J0?JLD"Plal`I""

' IZI! "69f; EE">D; "BJE; "CE"EAQ\_; B>">"B@KLAFE@?R"J: \_@A?9K; 9>"A9: ; ?"#J?J0?JLD" laT">D; "  
(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEE@9"EDJFF"JE"E@@9"JE"L?JB>@BJQF; "JG>; ?">D; "JLL@9>K; 9>"@G"  
>D; "+EE; KQFR"&@K KCEE@9="

' IZI!! "L?@Sc: ; ">D; "&@9S; 9; ?"J9: ">D; "@>D; ?"K; KQ; ?E"@G">D; "+>O. 2412-9(/2(K)-1(JQ)-22(K)-(R)-15(")

&@K KCEE@9">D; ": @BAK; 9>ET"E>J>; K; 9>E"J9: "t9@?KJ>@9"?; YA; E>; : T"VD; ?; AL@9">D; "  
(; B?; >J?R"EDJFF"@?>DV@>D"L?@SC: ; "B@LC; E">D; ?; @G"@?>D; "&@9S; 9; ?"J9: ">D; "@>D; ?"K; KQ; ?E"@G"  
>D; "+EE; KQFR"&@K KCEE@9!"

' I [I Z"+E"E@9"JE"L@EE@QF; "JG>; ?">D; "; <L@?J>@9"@G"EABD"L; ?@: "@G"Zb": JRE"?; G; ??; : ">@t9"  
#J?J0?JLD" I [I! T">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEE@9"EDJFF"L?@SC: ; "; JBD"#J?>R"V@>D"  
B@LC; E"@G">D; ": @BAK; 9>ET"E>J>; K; 9>E"J9: "t9@?KJ>@9": ; f@S; ?; : "QR">D; "@>D; ?"#J?>R"A9: ; ?"  
#J?J0?JLD" I [I! I!"

' I [I ["1D; "#J?>@; E"EDJFF"?; EL@9: ">@>D; "?; EL; B@CS; "t9S@>J>@9E"B@9>J@9; : "t9"#J?J0?JLDE" IZIZI]"  
J9: " IZIZI^"9@fJ>; ?>DJ9"Z! ": JRE"L@?@?>@>D; ": J>; "E; >@?>D; "2; J?t90"J9: "B@LC; E"@G"; JBD"  
#J?>RXE"?; EL@9E; "EDJFF">D; ?; AL@9"Q; "E; 9>"QR">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEE@9">@"  
>D; "@>D; ?"#J?>RI!"

' I ]"2JS@90"t9"K@9: ">D; "E>J>; K; 9>?; 0J?: @90"L?@L; ?"; <L; : @>@9"E; >"@A>"t9"#J?J0?JLD"+IZI! "QA>"  
>J\@90"JBB@A9>"@G">D; "9; ; : "@?>D; "#J?>@; E">@KJ\ ">D; @?": A; "L?; LJ?J>@9E"@?>D; "2; J?t90T"  
>D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEE@9"EDJFF"VD; 9"@E; ; KE"K@E>JLL?@L?@J>; ">@"  
D@KdD; ?="

' I ]! "B@9EAF>"V@>D">D; "&@9S; 9; ?"J9: ">D; "@>D; ?"K; KQ; ?E"@G">D; "+EE; KQFR"&@K KCEE@9"JE">@"  
J"EAC>JQF; "S; 9A; T": J>; "J9: ">@K; "@?>D; "2; J?t90"J9: T"VD; ?; "L@EE@QF; T"V@>D">D; "#J?>@; E"JE">@"J"  
EAC>JQF; ": J>; "J9: ">@K; "@?>D; "2; J?t90"J9: T"DJS@90"E@B@9EAF>; : T": ; BC: ; ">D; ?; AL@9"J9: "

'I] ] T (E) -116 (?)-17 (@) -4 (L)@ (9)">(") -2 (V) -2 (Q) -3 ( (") -2 (:) -3 (J) -9 ((?) -3 (@ (9))(J) -9 ((?)

>DJ>">D; R"A9: ; ?E>J9: ">D; "; SC: ; 9>LJF"; GG; B>"@G">D; "J0?; ; K; 9>"?; JBD; : "QR">D; K"JE"E; >"@A>"C9"









' laIZI^"JFF": ?AOE3"J9: ": ?C9\3?; fJ>; : "@GG; 9B; EI"

"

' laI ["-G">D; "BJE; "GJFFE"V<D<9">DCE"#J?J0?JLD" laI">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEEC@9" EDJFF"JE"E@@9"JE"L?JB>CBJQF; "JG>; ?">D; "JLL@<9>K; 9>"@G">D; "+EE; KQFR"&@K KCEEC@9T"9@>CGR">D; "#J?>C; E"@G">D; "B@KLAFE@?R"J: \_@A?9K; 9>"@G">D; "BJE; I"

"

' laI]"->"EDJFF"Q; ">D; "?; EL@9ECQCF<R"@G">D; "5J9: J>; : "/?@AL">@L?@BA?; "J": AFR"B; ?>CC; : "&@A?>" ?; B@?: "@?"K; K@?J9: AK"@G">D; "; ; BCEC@9"@G">D; "B?CKC9JF"@?"BCSCF"B@A?>"C9"B@99; B-><@9"V<D"J9R" EABD"BJE; "J9: ">@f@: 0; "C">V<D">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCEEC@9T"

"

"

' Ibl^"+9R"GJcFA?; T"A99; B; EEJ?R": ; FJR"@?"@QE>?AB>{@9"@9">D; "LJ?>"@G">D; "K{9CE>; ?"9"B@KLFRC90" V{>D">D; "?; YAc?; K; 9>E"@G"#J?J0?JLD" lal`l"

"

' Ibl`"1D; ">; ?KE"@G"J9R"&JA>{@9"KLE; : "@9">D; "K{9CE>; ?"J">D; "&JA>{@9"(>J0; "J9: ">D; " K{9CE>; ?gE"?; JB>{@9">D; ?; >@T"LJ?>{BAFJ?FR"9">; ?KE"@G"DCEdD; ?"L; ?G@?KJ9B; "J9: ">D; "F; S; F"@G" DCEdD; ??; EL@9E; ">@">D; "&JA>{@9": A?90">D; "L; ?{@: "VDcf; ">D; "&JA>{@9"VJE"9"LFJB; l"

"

' lcl!"1D; "+EE; KQFR"&@K KCEE{9"DJE"9@L@V; ?">@"JBB; L">D; "S@fA9>J?R"?; EC09J>{@9"@G"J" K{9CE>; ?l"+"K{9CE>; ?"KJR"D@V; S; ?"J">J9R">{K; ": A?90">D; "\*CEBLCf9J?R"#?@B; EE"J9: "@G"DCEdD; ?" @V9"G?; ; "Vcf"KJ\; "J"V?{>; 9"E>J>; K; 9">@">D; "+EE; KQFR"&@K KCEE{9"J: K{>{90">D; ">?A>D"@G" E@K; "@?"Jff"@G">D; "GJB>E"@?"BC?BAKE>J9B; E"Jff; 0; : T"@9">D; "QJCE"@G"VDCBD">D; "+EE; KQFR" &@K KCEE{9"V@Af: "B@9EC: ; ?{>"B@??; B">@"KJ\; "J": ; BCE{9">@": ; f; >; "A9: ; ?"

"

YA; E>@9">D; "K9CE>; ?"@"J9R"@G">D; "V<9; EE; E"9@"L?; E; 9">D; "K9CE>; ?X"?; EL@9E; "9@">J\; "  
J9R"JB>CS; "LJ?>"9">D; "2; J?90I"  
"

' !| e!| IZ"-G">D; "K9CE>; ?"; F; B>E">@9S<; ">D; "JBB@KLJ9R90"L; ?E@9">@L?; E; 9">D; "K9CE>; ?X"  
?; EL@9E; T">D; "K9CE>; ?"Vff"9@"Q; "L; ?K<>; : "9">D; "9>; ?; E>E"@G">D; "0@@: "@?: ; ?90"@G">D; "  
L?@B; : A?; E"J">D; "2; J?90">@YA; E>@9">D; "V<9; EE; E"9@"L?; E; 9">D; "?; EL@9E; "  
DCKE; FGD; ?E; FGI"  
"

' !| e!| I["1D; "+EE; KQFR"&@KKEE@9"KJR"J">"E": CEB?; >@9": ; LJ?>"G?@K">D; "E>?CB>"JLLFCBJ>@9"@G"  
#J?J0?JLDE" !| e!| I! "J9: " !| e!| IZ"QA>@9FR"E@T@90"JE">D; "JBB@KLJ9R90"L; ?E@9": @; E"9@">JB>"

+9R"@>D; ?"L; ?E@9"QR">D; ": ?; B>?@9"@>D; "+EE; KQFR"&@K KCEE?@9"J9: "V?>D"L?@?"  
9@>?@9">D; "#J?>?; EI"

"

' ! ZIZ"1D; "(; B?; >J?R"@>D; "+EE; KQFR"&@K KCEE?@9"EDJFF"MA9F; EE"; <BFA: ; : "G@?"; JE@9E"  
EL; BCG; : "C9"#J?JO?JLD"&I [! ! "J>> ; 9: ">D; "2; J?C90"G@?">D; "LA?L@E; "@G"OCSC90"EABD"L?@B; : A?JF"  
J: SCB; ">@>D; "+EE; KQFR"&@K KCEE?@9"JE"KJR"Q; "JLL?@L?CJ>; "J9: "@G"; 9EA?C90"B@K LFCJ9B; "V?>D"  
#J?JO?JLD" ! ZI]I"(dD; "EDJFF"9@>"Q; "L?; E; 9>"VD; 9">D; "+EE; KQFR"&@K KCEE?@9": ; FCQ; ?J>; E"J9: "  
: ; BC: ; E"@9">D; "BJE; I"

"

' ! ZI["-9">D; "; S; 9>"DJ">D; "(; B?; >J?R"@>D; "+EE; KQFR"&@K KCEE?@9"BJ99@>"G@?"J9R"?; JE@9"Q; "  
L?; E; 9>"J">D; "2; J?C90T">D; "+EE; KQFR"&@K KCEE?@9"EDJFF"t>E; FG"JLL@C9">"EABD"L; ?E@9"JE"t>"  
B@9EC; ; ?E"JLL?@L?CJ>; ">@: ; LA>?E; "G@?"DCkDd; ?"G@?">DJ>"LA?L@E; T"JEB; ?>J?C90"Q; G@?; DJ9: "  
>DJ>"EABD"L; ?E@9"CE"9@>; <BFA: ; : "G@?"; JE@9E"EL; BCG; : "C9"#J?JO?JLD"&I [! ! I" (ABD"L; ?E@9"EDJFF"  
BJ??R"@A">D; ": A>?; E"E; >"@A">"C9"#J?JO?JLD" ! ZIZ"QA">"EDJFF"9@>"Q; "L?; E; 9>"VD; 9">D; "+EE; KQFR"  
&@K KCEE?@9": ; FCQ; ?J>; E"J9: ": ; BC: ; E"@9">D; "BJE; I"

"

' ! ZI]"1D; "(; B?; >J?R"@>D; "+EE; KQFR"&@K KCEE?@9"@?"DCEdD; ?": ; LA>R"EDJFF"L?; LJ?; "J"  
EAKKJ?R"K?C9A>; "@G">D; "L?@B; ; : C90E"J">D; "2; J?C90"MD; "(; B?; >J?RXE"K?C9A>; NI"OD; ?; "  
L@EECF; T"J"S; ?QJ>?K"?; B@?: "@G">D; "L?@B; ; : C90E"EDJFF"JFE@"Q; "KJ: ; "QR"; F; B>?@9CB"?; B@?: C90"@?"  
QR"EABD"@>D; ?"K; J9E"JE"EDJFF"Q; ": ?; B>; : "QR">D; "&@9S; 9; ?"@G">D; "+EE; KQFR"&@K KCEE?@9I"1D; "  
\$; B@?: "@G">D; "2; J?C90"EDJFF"B@9ECE">"@G">D; "(; B?; >J?RXE"K?C9A>; ">@0; >D; ?"V?>D"J9R"EABD"  
S; ?QJ>?K"?; B@?: T"VDCBD"EDJFF"Q; ">?J9EB?CQ; : "C9">D; "; S; 9>"@G"J9"JLL; JFI"

"

' ! I [I]"1D; "B@9: AB>"@G">D; "2; J?C90"CE"9">D; "DJ9: E"@G">D; "+EE; KQFR"&@K KCEE?@9"J9: T"EAQ\_ ; B>"  
>@>D; "+EE; KQFR"&@K KCEE?@9XE"@S; ??C: C90": CEB?; >?@9T">D; "@?; ; ?"@G"L?@B; : A?; "EDJFF"Q; "JE"  
G@FF@VE="

"

' ! I [IZ"1D; "5J9: J>; : "/?@AL">D?@AOD"t>E"EL@\\; EL; ?E@9"EDJFF"Q; "OCs; 9">D; "@LL@?>A9?R">@"  
KJ\\; "J9"@L; 9C90"EAQKCEE?@9"J9: ">D; 9">@L?; E; 9>"t>E"; SC: ; 9B; "J9: "YA; E>?@9?>E"V?>9; EE; EI"  
#; ?E@9E"BJFF; : ">@OCs; "; SC: ; 9B; "QR">D; "5J9: J>; : "/?@AL"J?; "@L; 9">@YA; E>?@9C90"QR">D; "  
K?C9E>; ?@?"DCEdD; ?"EL@\\; EL; ?E@9"JE">D; "BJE; "KJR"Q; I"

"

' ! I [I["-G">D; "K?C9E>; ?"CE"L?; E; 9>C90"DCEdD; ?"@V9"BJE; T"EdD; "EDJFF">D; 9"Q; "OCs; 9">D; "  
@LL@?>A9?R">@L?; E; 9>"DCEdD; ?"; SC: ; 9B; "C9"L; ?E@9T"G@FF@V?C90"VDCBD"EdD; "CE">D; 9"@L; 9">@"  
YA; E>?@9C90"QR">D; "EL@\\; EL; ?E@9"G@?">D; "5J9: J>; : "/?@ALI"

"

' ! I [I["-G"J"EL@\\; EL; ?E@9"CE"JLL; J?C90"G@?">D; "K?C9E>; ?T">DJ>"EL@\\; EL; ?E@9"EDJFF"Q; "OCs; 9">D; "  
@LL@?>A9?R">@G"YA; E>?@9C90">D; "K?C9E>; ?T"VD@"EDJFF">D; 9"Q; "@L; 9">@"

"

; SC: ; 9B; ">DJ>"V<9; EE"EDJFF">D; 9"Q; "@L; 9">@"YA; E>@9<90"QR">D; "EL@\; EL; ?E@9"Q@?">D; "  
5J9: J>; : "/?@ALI"

"

' ! ] I ! "1D; "K; KQ; ?E"@G">D; "+EE; KQFR"&@K K<EE<@9"EDJFF"Q; "; 9>f; : ">@"JE\ "YA; E>@9E"J9: "JFE@"  
>@<9>; ?\_ ; B>: A?<90">D; "; <JK<9J>@9"@G"V<9; EE; E"Q">D; R"B@9EC: ; ?">D; "YA; E>@9<90">@"Q; "  
@LL?; EE<S; "@?<K KJ>; ?<JF">@">D; "KJ>>; ?<9"DJ9: "@?<G"Q@?"J9R"@">D; ?"?; JE@9">D; R"B@9EC: ; ?<"  
JLL?@L?<J>; "E">@" : @I"

"

' ! ] I Z"#; ?E@9E"VD@"DJS; "JF?; J: R"Q; ; 9"YA; E>@9; : "KJR"Q; "JE\ ; : ">@"J9EV; ?"GA?>D; ?"  
YA; E>@9E"J>; ?<9">D; "2; J?<90"Q"Q"JLL; J?E">@">D; "+EE; KQFR"&@K K<EE<@9">DJ>">D<E"V@AF: "Q; "  
D; FLGAF"J9: "JLL?@L?<J>; "Q">D; "B<?BAKE>J9B; EI"

"

' ! ] I ["+"?; L?; E; 9>J><S; "@G">D; "&DA?BDXE"F; OJF"J: S<E; ?E"EDJFF"9@?KJFFR"Q; "L?; E; 9>"J">D; "  
2; J?<90"WA9F; EE"D<EdD; ?"J>>; 9: J9B; "DJE"Q; ; 9"; <L?; EEFR

"



"

' !! a". @L; ?E@9"JLL; J?C90"C9"J9R"BJLJBC>R"Q; G@?; ">D; "+EE; KQFR"&@K KCEE@9"J>">D; "2; J?C90" MJE": CE>C9B>"G?@K">D@E; "E; ?S(C90">D; "+EE; KQFR"&@K KCEE@9"C9"B@K LFCJ9B; "V(C>D"#J?J0?JLD" ' !! ZIJN"EDJFF"KJ\; "J9R"?; B@?: "@G"J9R"LJ?>"@G">D; "L?@B; ; ; C90E"J">D; "2; J?C90"QR"K; J9E"@G"J9R" >JL; "?; B@?: C90"ERE>; K"@?"@>D; ?"K; BDJ9CBJF"@?"; F; B>?@9CB"?; B@?: C90": ; SCB; "@?"ERE>; KI"

"

' !! b"OD; 9">D; "L?@B; EE"@G"L?; E; 9>C90"J9: "; <JK(C9C90">D; "; SC: ; 9B; "J">D; "2; J?C90"DJE"Q; ; 9" B@9BFA: ; ; T">D; "EL@\; EL; ?E@9"G@?">D; "5J9: J>; ; "/?@AL"J9: ">D; "K(C9CE>; ?"@?">D; " JBB@K L J9R(C90"L; ?E@9"JE"JLL?@L?CJ>; "M9">DJ>"@?: ; ?N"EDJFF"Q; "OCs; 9">D; "@LL@?>A9C>R">@" J: ; ?; EE">D; "+EE; KQFR"&@K KCEE@9T"G@FF@V(C90"VDCBD">D; "&@9S; 9; ?"@G">D; "+EE; KQFR" &@K KCEE@9"EDJFF"J99@A9B; ">@">D; "#J?>C; E">DJ>">D; "K; KQ; ?E"@G">D; "+EE; KQFR"&@K KCEE@9" V@AF: "J">DJ>"L@C9>"?; >C?; ">@"B@9EC: ; ?">D; C?": ; B(C@9"VDCBD"V@AF: "9@>"Q; "J99@A9B; ; ">DJ>: "JR" QA>"V@AF: "Q; "9@>CC; ; ">@">D; "#J?>C; E"C9"JBB@?: J9B; "V(C>D"#J?J0?JLD")I^! I"1D; "2; J?C90"CE">DAE" B@9BFA: ; ; I"

"

**F A C**

"

)!! !!")@ff@V(C90">D; "B@9BFAEC@9"@G">D; "2; J?C90T">D; "+EE; KQFR"&@K KCEE@9"EDJFF"JFF"K; ; >C90" >@0; >D; ?"QA>"C9">D; "JQE; 9B; "@G">D; "#J?>C; ET"B@9EC: ; ?">D; "; SC: ; 9B; "D#CTJT(?)7(Q)(T)cf. OO3(;?)17?E/O.

"



)I`!!"+>">D;"EJK;">CK;"JE"EdD;"E;?S;E"@9">D;"K(9CE>?"J9:">D;"5J9:J>;:"/?@AL">D;"



"

^["

/I [IZ"1D; "+LL; JFE"&@K KCEE@9"G@?">D; "D; J?C90"@G"; JBD"EABD"JLL; JF"EDJFF"B@9ECE>"@G">D; "  
G@ff@VC90"GS; "L; ?E@9E="

"

/I [IZI! "+&@9S; 9; ?"VD@"EDJFF"Q; "J"K; KQ; ?"@G">D; "69C; : "\$; G@?K; : "&DA?BD"MQA>"9@>"  
9; B; EEJ?CFR"J"K; KQ; ?"@G">D; "/" ; 9; ?JF"+EE; KQFRN"VGD"F; OJF"J9: d@?">?QA9JF"; <L; ?C; 9B; ">@Q; "  
E; F; B>; : "QR">D; "@GGB; ?E"@G">D; "/" ; 9; ?JF"+EE; KQFR"J9: "

"

/I [IZIZ"%9; "@G">D; "5@: ; ?J>@?E"@G">D; "/" ; 9; ?JF"+EE; KQFR"@?"G"G@?"J9R"?; JE@9"9; C>D; ?"ED@AF: "  
Q; "JQF; ">@E; ?S; T"J"G@?K; ?"5@: ; ?J>@?"@G">D; "/" ; 9

"

^]"

/I^I["1@"; 9EA?; >DJ>>D; "JLL; JFE"L?@B; EE"CE"K@S; : "Jf@90"Q9"J">CK; FR"KJ99; ?"J9R". @>CB; "@G"  
%Q\_; B>C@9"?; B; CS; : "@A>EC; : ">D; "L; ?C@: "Jff@V; : "Vcff"9@>"9@?KJffR"Q; "B@9EC; : ?; : "A9F; EE"S; ?R"  
0@@: "?; JE@9"BJ9"Q; "ED@V9"G@?"C>E"fJ>; "; ; fCS; ?RI"  
"

/I^I]"1D; "%GGCB; ?E"@G">D; "/; 9; ?JF"+EE; KQfR"EDJff"B@9EC; : ?"; S; ?R"@Q\_; B>C@9"L?@L; ?FR"9@>CGC; : "  
J9: "EDJff"; ; BC; : "VD;>D; ?">@"ALD@f: "@?">@"?; \_; B>">D; "@Q\_; B>C@9I"  
"

/I^I^-G">D; R"?; \_; B>">D; "@Q\_; B>C@9T">D; "/; 9; ?JF"(; B?; >J?R"EDJff"E; ?S; "9@>CB; ">D; ?; @G"@9">D; "  
@Q\_; B>@?I"  
"

/I^I^-G">D; R"ALD@f: ">D; "@Q\_; B>C@9T">D; "/; 9; ?JF"(; B?; >J?R"EDJff"E; ?S; "9@>CB; ">D; ?; @G"@9">D; "  
@Q\_; B>@?T">D; "L; ?E@9">@"VD@K">D; "@Q\_; B>C@9"VJE">J\; 9"J9: ">D; "@>D; ?"#J?>R"@9"VD@K">D; "  
. @>CB; "EL; BCGC; : "C9"#J?J0?JLD"/I^I! "VJE"E; ?S; : I"  
"

/I^Ia"-9">D; "; S; 9>"@G"J9R"@Q\_; B>C@9"Q; C90"ALD; f: T">D; "L?@B; : A?; "@A>fC9; : "C9"#J?J0?JLDE"/I]"  
J9: "/I^"@G">D; E; "\$Af; E"EDJff"Q; "?; L; J>; : ">@"B@Klf; >; ">D; "JLL@C9>K; 9>"@G">D; "+LL; JFE"  
&@KkCEEC@9"J9: ">@"OCs; "9@>CB; ">@">D; "#J?>C; E"@G">D; "L; ?E@9"JLL@C9>; : I

"

/Ibl["+9R"V?<>; 9"VJ?9C90"CEEA; : T"9BFA: C90"J"B@LR"@G"J9R": C?; B>C@9"CEEA; : ">@">D; "(R9@: "5@: ; ?J>@?d/; 9; ?JF"+EE; KQFR"\$; L?; E; 9>J>C\$; I"

"

/Ibl]" +9R"OAC: J9B; "JLL; 9; ; : ">@">D; "; : BCEE@9"9"JBB@?: J9B; "V<D"#J?J0?JLD")IZI[I"

"

/Ibl^"+9R"&JA>C@9E"m@>D; ?">DJ9">D@E; "EABB; EEGAFFR"JLL; JF; : "JOJ9E>M"

"

/Ibl`"1D; ". @>C; "G"+LL; JF"B@9>J9C90">D; "0?@A9: E"G@?">D; "JLL; JFI"

"

/Ibla"+9R"B@A9>; ?3E>J>; K; 9>"?; B; C\$; : "A9: ; ?"#J?J0?JLD"/IZIZ"@?"#J?J0?JLD"/IZI[I"

"

/Iblb"1D; "Q@: R"@G"LJL; ?E"JG: "Q; G@?; ">D; "+EE; KQFR"&@K KCEE@9"9"D; J?90">D; "BJE; I"

"

/Iblc"1D; "\$; B@?: "@G">D; "2; J?90I"M(; ; "#J?J0?JLD" !I ZI]N"

"

/Ic"1D; "+LL; JFE"&@K KCEE@9"VD; 9"B@9E>A>; : "EDJFF"B@9EC: ; ?">D; "G@FF@V90"KJ>>; ?E="

"

/Icl! "OD; >D; ?">D; ?; "CE"@?"KJR"Q; "9; V"9G@?KJ>C@9"VDCBD"DJE"B@K; ">@fCOD>"J9: "VDCBD"B@AF: "9@>"?; JE@9JQFR"DJS; "Q; ; 9"JSJGfJQF; ">@">D; "+EE; KQFR"&@K KCEE@9"Q; G@?; "C>E": ; BCEE@9"VJE">J\; 9"A9: ; ?"#J?J0?JLD")IZI"

"

/IclZ"OD; >D; ?"J9R"EABD"9; V"9G@?KJ>C@9"V@AF: "9"9E"@L9C@9"DJS; "Q; ; 9"KJ>; ?JF"9">DJ>I"DJ: "C>"Q; ; 9">; E>; : "J9: "L?@S; : ">@">D; "EJ>CEGJB>C@9"@G">D; "+EE; KQFR"&@K KCEE@9"9"9"KCOD">"DJS; "BJAE; : "C>@">?; JBD"J":

"



/I! eI]"1D; "/; 9; ?JF" (; B?; >J?R"EDJFF"MA9F; EE"; <BFA: ; ; "G@?">D; "?; JE@9E"EL; BCGG; : "C9"#J?J0?JLD"  
&I[I! N"J>>; 9: ">D; "2; J?C90"G@?">D; "LA?L@E; "@G"OCSC90"EABD"L?@B; : A?JF"J: SCB; ">@">D; "+LL; JFE"  
&@K KCEEC@9"JE"KJR"Q; "JLL?@L?CJ>; "J9: "@G"\; ; LC90"J"G@?KJF"?; B@?: "@G">D; "2; J?C90I"(dD; "EDJFF"  
9@>"Q; "L?; E; 9>"VD; 9">D; "+LL; JFE"&@K KCEEC@9": ; FCQ; ?J>; E"J9: ": ; BC: ; E"@9">D; "BJE; I"  
"

/I! eI^"-G">D; "/; 9; ?JF" (; B?; >J?R"BJ99@>"G@?"J9R"?; JE@9"Q; "L?; E; 9>"J">D; "2; J?C90I">D; "+LL; JFE"  
&@K KCEEC@9"EDJFF"GE; FG"JLL@C9">"EABD"L; ?E@9"JE"GE"B@9EC: ; ?E"JLL?@L?CJ>; ">@": ; LA>CE; "G@?"



"

^c"



2IZI! (" ; ?SCB; "@G"J9R": @BAK; 9>"?; YAC?; : ">"Q; "E; ?S; : "@9"J9"Q9: CSC: AJF"EDJFF"Q; " : ; ; K; : ">"@  
DJS; "Q; ; 9"L?@L; ?FR"; GG; B> : "C9"J9R"@G">D; "G@ff@Vc90"VJRE="

2IZI!! "PR": ; fCS; ?C90">D; ": @BAK; 9>"L; ?E@9JFFR">">D; "C9: CSC: AJF">"Q; "E; ?S; : !"

2IZI! IZ"PR": ; fCS; ?C90">D; ": @BAK; 9>"@?"E; 9: C90"Q"QR"GC?E>"BFJEE"L?; 3LJC: "L@E>"@?"QR"\$; B@?; : ; : "  
\* ; fCS; ?R"L@E>"J: : ?; EE; : ">">D; "FJE>"\9@V9"J: : ?; EE"@G">D; "C9: CSC: AJF">"Q; "E; ?S; : "C9"J"E; JF; : "  
; 9S; f@L; "J: : ?; EE; : ">">DJ>"C9: CSC: AJFI"

2IZI! I["-9"EABD"@>D; ?"KJ99; ?"JE">D; "+EE; KQFR"&@K KCEEc@9"@?">D; "+LL; JFE"&@K KCEEc@9"MG"  
E; ?SCB; "?; FJ> ; E">">D; "+LL; JFE"#?@B; : A?; N"@?">D; "&@9S; 9; ?"@?"\* ; LA>R"&@9S; 9; ?"@G">D; "  
&@K KCEEc@9"#J9; F"MG"E; ?SCB; "?; FJ> ; E">"J"L; ?@: "L?@?">">D; "JLL@c9>K; 9>"@G">D; "+EE; KQFR"  
&@K KCEEc@9N"KJR": C?; B>"DJS"90"?; OJ?: ">">D; "BC?BAKE>J9B; EI"

2IZIZ(" ; ?SCB; "@G"J9R": @BAK; 9>"?; YAC?; : ">"Q; "E; ?S; : "@9"J9R"5J9: J> ; : "/?@AL"EDJFF"Q; "  
: ; ; K; : ">"@DJS; "Q; ; 9"L?@L; ?FR"; GG; B> : "C9"J9R"@G">D; "G@ff@Vc90"VJRE="

2IZIZI! "PR": ; fCS; ?C90">D; ": @BAK; 9>"L; ?E@9JFFR">">DJ>"K; KQ; ?"@G">D; "5J9: J> ; : "/?@AL"VD@  
DJE"Q; ; 9"9@Kc9J> ; : "C9">D; "\$; G; ??JF". @>B; ">"@JBB; L>"E; ?SCB; "@?"C9">D; "JQE; 9B; "@G"EABD"  
9@Kc9J>@9">">D; "L; ?E@9"VD@"E009; : ">D; "\$; G; ??JF". @>B; T"L?@Sc: ; : ">DJ>"C9"; C>D; ?"BJE; "EABD"  
L; ?E@9"CE"E"ff"J"K; KQ; ?"@G">D; "5J9: J> ; : "/?@AL"VD; 9"EABD"E; ?SCB; "CE"?; YAC?; : ">"Q; "  
; GG; B> ; !"

2IZIZIZ"PR": ; fCS; ?C90">D; ": @BAK; 9>"@?"E; 9: C90"Q"QR"GC?E>"BFJEE"L?; 3LJC: "L@E>"@?"QR"\$; B@?; : ; : "  
\* ; fCS; ?R"L@E>"J: : ?; EE; : ">">D; "L; ?E@9"?; G; ??; : ">"@C9"#J?J0?JLD"2IZIZI! "J">D; "J: : ?; EE"  
EL; BCGC; : "C9"EABD"9@Kc9J>@9"@?"C9">D; "JQE; 9B; "@G"EABD"9@Kc9J>@9T"J">D; "J: : ?; EE"OCs; 9"C9"  
>D; "\$; G; ??JF". @>B; I"

2IZIZI["-9"EABD"@>D; ?"KJ99; ?"JE">D; "+EE; KQFR"&@K KCEEc@9"@?">D; "+LL; JFE"&@K KCEEc@9"MG"  
E; ?SCB; "?; FJ> ; E">">D; "+LL; JFE"#?@B; : A?; N"KJR": C?; B>"DJS"90"?; OJ?: ">">D; "BC?BAKE>J9B; EI"

2IZIZI(" ; ?SCB; "@G"J9R": @BAK; 9>"?; YAC?; : ">"Q; "E; ?S; : "@9">D; "( ; B?; >J?R"@G">D; "+EE; KQFR"  
&@K KCEEc@9"@?"@9">D; "/ ; 9; ?JF"( ; B?; >J?R"EDJFF"Q; " : ; ; K; : ">"@DJS; "Q; ; 9"L?@L; ?FR"E; ?S; : "CG"  
: ; fCS; ?; : "@?"E; 9>"QR"GC?E>"BFJEE"L?; 3LJC: "L@E>"@?"QR"\$; B@?; : ; : "\* ; fCS; ?R"L@E>"J: : ?; EE; : ">">D; "

2I["\*; F; >@9"JE"J"?; EAF>"@G">D; "\*CEBCLF9J?R"#?@B; EE"EDJFF"DJS; ">D; "; GG; B>"@G">; ?K9J>90"J9R"  
B@9>?JB>T"V?<>; 9"@?"@?JFT"Q; >V; ; 9">D; "K9CE>; ?"J9: ">D; "69<; : "\$; G@?K; : "&DA?BD"@?"J9R"  
B@9E>A; 9>"LJ?>">D; ?; @G"9"?; FJ>@9">"DCEdD; ?"K9CE>?R!"  
"

2I]I! "-9"BJE; E"VDCBD"DJS; "QRLJEE; : "@?"DJS; "L?@B; ; ; : "Q; R@9: ">D; "&JA>@9"(>J0; T"V<>D9"  
@9; "K@9>D"@G">D; "B@9BFAE@9"@G"; JBD"BJE; ">D; "5J9: J>; : "/?@AL"EDJFF"LA?EAJ9>">@<>E"  
?; L@?>90"@QFC0J>@9"9@>; : "J">#J?J0?JLDE"PIbIZI! T")I`I["@?"/I! aT"VDCBD; S; ?"CE"JLLfCBJQF; T"  
F@; 0; "J"V?<>; 9"?; L@?>"@G">D; "BJE; "V<>D">D; "(; B?; >J?R"@G">D; "+EE; KQFR"&@K KCE@9T"VD@"  
EDJFF"9"@?: ; ?">"L?; E; ?S; "B@9G

"

J G A

"

UI! "1D; "/; 9; ?JF"(; B?; >J?R"EDJFF"?; L@?>">D; "/; 9; ?JF"+EE; KQFR"JFF": ; BCEC@9E"?; JBD; : "QR">D; "+EE; KQFR"&@K KCEEC@9"J9: ">D; "+LL; JFE"&@K KCEEC@9"m@>D; ?">DJ9"&JA>C@9E"CKL@E; : "QR">D; "(R9@: "+LL@C9>; ; E"J9: ": ; BCEC@9E"KJ: ; "QR">D; "(L; BCJF"+LL; JFE"P@: R"A9: ; ?"#J?J0?JLD" I^I[" JOJC9E">D; "CKL@E<C@9E"@G"&JA>C@9E": A?C90">D; "&JA>C@9"(>JO; N"C9">D; "G@ff@Vc90"KJ99; ?="

"

UI! I! "-G"J": ; BCEC@9"@G">D; "+EE; KQFR"&@K KCEEC@9"CE"EAQ; B>">@JLL; JF">D; "\$; L@?>"EDJFF"ECKLFR" E>J>; ">DJ>"J": ; BCEC@9"DJE"Q; ; 9"?; JBD; : "C9"J"BJE; "VDCBD"CE"EAQ; B>">@JLL; JF"J9: "EDJFF"9@>" 9JK; ">D; "Kc9CE>; ?!"

"

UI! IZ"-G"J": ; BCEC@9"@G">D; "+EE; KQFR"&@K KCEEC@9"CE"9@>"EAQ; B>">@JLL; JF"J9: "CE">@: ; F; >; " A9: ; ?"#J?J0?JLD") IZI! T">D; "\$; L@?>"EDJFF"E@E>J>; "J9: "9JK; ">D; "Kc9CE>; ?!"

"

UI! I["-G"J": ; BCEC@9"@G">D; "+EE; KQFR"&@K KCEEC@9"CE"9@>"EAQ; B>">@JLL; JF"J9: "CE">@Jff@V">D; " 9JK; "@G">D; "Kc9CE>; ?">@?; KJc9"@9">D; "\$@ff"@G"5c9CE>; ?E"A9: ; ?"#J?J0?JLD") IZI! "VcD"@? " VcD@A">D; "CEEA; "@G"J"V?C>>; 9"VJ?9c90"A9: ; ?"#J?J0?JLD") IZIZT">D; "\$; L@?>"EDJFF"E@E>J>; " VcD@A">9JKc90">D; "Kc9CE>; ?!"

"

UI! I] "-9"J9R"BJE; "VDCBD"0@; E"Q; G@?; ">D; "+LL; JFE"&@K KCEEC@9T"CG">D; ": ; BCEC@9"CE">@: ; F; >; T">D; "\$; L@?>"EDJFF"JBB@?: "VcD"#J?J0?JLD"UI! IZ"J9: "CG">D; ": ; BCEC@9"CE">@Jff@V">D; "9JK; "@G">D; " Kc9CE>; ?">@?; KJc9"@9">D; "\$@ff"@G"5c9CE>; ?E"VcD"@?VcD@A">D; "CEEA; "@G"J"V?C>>; 9"VJ?9c90T" >D; "\$; L@?>"EDJFF"JBB@?: "VcD"#J?J0?JLD"UI! I["

"

UI! I^"/Ac: J9B; "JLL; 9: ; ; ">@J9R": ; BCEC@9"@G">D; "+EE; KQFR"&@K KCEEC@9"@?>D; "+LL; JFE"

"

+EE; KQFR"&@K KCEE@9"J9: T"9">D; "; S; 9>"@G"J9"JLL; JF"V<D">D; "/; 9; ?JF"(; B?; >J?R": A?90">D; "  
B@A?E; "@G">D; "L?@B; ; : C9OEI"1D; "B@KLF; >; "QA9: F; "@G"JFF">D; E; "LJL; ?E"EDJFF"Q; "\; L>"9"Jf@B\; : "  
BJQC9; >"J>"&DA?BD"2@AE; I"  
"



