

HYa d c g Ø b X Y f ' U i Z [Y d U g g h . ' 6 `] h n Y f '] b
? c V ` Y b n ' U a ' & * "' 5 i [i g h ' U _ h] j °

HYa d c g Ø b X Y f '] b ? c V ` Y b n ' U i Z [Y d U g g h . ' 5 a ' & * "\$, "& \$ & (X f c \ Y b ` \ c \ Y ' 6 i » [Y ` X Y f ' X i f W ` a c V] ` Y ' 6 `] h n Y f " <] Y f ' U ` Y ' ð Z c g n i ' F U X U f _ c b h f c ` ` Y b "

5 a ' A c b h U [ž ' X Y a ' & * "' 5 i [i g h i & \$ & (ž ' a Ø g g Y b ' 5 i h c Z U \ f Y f '] b
? c V ` Y b n ' V Y g c b X Y f g ' U i Z a Y f _ g U a ' g Y] b " 8] Y ' G h U X h ` \ U h ' X] Y
ð g h U ` U h] c b ' Y] b Y g ' a c V] ` Y b ' 6 `] h n Y f g ' V Y _ U b b h [Y [Y V Y b ž ' X Y f ' X U n i
X] Y b h ž ' H Y a d c g Ø b X Y f b ' Y] b Y b ' G h f] W ` X i f W ` X] Y ' F Y W ` b i b [' n i
a U W ` Y b " ' K Y f ' g] W ` b] W ` h ' U b ' X] Y ; Y g W ` k] b X] [_ Y] h g V Y [f Y b n i b [Y b
\ À ' h ž ' a i g g ' a] h ` \ c \ Y b ' 6 i » [Y ` X Y f b ' f Y W ` b Y b "

5 _ h i Y ` `] g h X Y f ' a c V] ` Y ' F U X U f _ U g h Y b '] b ' X Y f ' < U b g ! 6 Ò W _ ` Y f ! G h f U » Y '] b
? Y g g Y ` \ Y] a ž ' a] h ' Y] b Y a ' H Y a d c `] a] h j c b ' + \$ ' _ a # ž ' d c g] h] c b] Y f h " 8] Y
A Y ` X i b [' Ø V Y f ' X] Y ' 5 i Z g h Y ` i b [' X Y g ' 6 `] h n Y f g ' Y f Z c ` [h Y ' i a ' & \$. % * ' i \ f ž
i b X ' _ i f n Y ` N Y] h i g d À h Y f ' k i f X Y ` X] Y ' ð Z c f a U h] c b ' U _ h i U '] g] Y f h " 9 g '] g h
k] W ` h] [' n i ' Y f k À \ b Y b ž ' X U g g ' X] Y [Y b U i Y b ' G h U b X c f h Y ' j c b
6 `] h n [Y f À h Y b '] b ? c V ` Y b n ' g] W ` g h À b X] [' À b X Y f b ' _ Ò b b Y b ž ' k U g
V Y X Y i h Y h ž ' X U g g : U \ f Y f ' g h Y h g ' k U W ` g U a ' V ` Y] V Y b ' g c ` ` h Y b "

I b Z U ` ` j Y f a Y] X i b [' i b X
G] W ` Y f \ Y] h g V Y k i g g h g Y] b

8] Y ' 9] b Z Ø \ f i b [' g c ` W ` Y f ' a c V] ` Y b ' F U X U f _ c b h f c ` ` Y b '] g h ' Y] b Y ' X Y f
A U » b U \ a Y b ž ' X] Y ' n i f ' 9 f \ Ò \ i b [' X Y f ' J Y f _ Y \ f g g] W ` Y f \ Y] h ' V Y] h f U [Y b
g c ` ` Y b " 9] b ' U b [Y d U g g h Y g : U \ f j Y f \ U ` h Y b ' g W ` Ø h n h ' b] W ` h ' b i f ' X Y b
: U \ f Y f ' g Y ` V g h ž ' g c b X Y f b ' U i W ` U ` Y ` U b X Y f Y b ' J Y f _ Y \ f g h Y] ` b Y \ a Y f "
6 Y X Y i h Y h . ' < Ò W ` g h [Y g W ` k] b X] [_ Y] h Y b ' g] b X ' b] W ` h ' b i f ' <] b k Y] g Y ž ' g] Y
g] b X ' J c f g W ` f] z h Y b ž ' X Y f Y b ' A] g g U W ` h i b [' Y f b g h \ U z h Y ' ? c b g Y e i Y b n Y b
\ U V Y b ' _ U b b " B Y V Y b ' X Y b ' ? c b g Y e i Y b n Y b ' X i f W ` 6 i » [Y ` X Y f ' _ U b b

ØVYf\ Ò\hYg'HYa dc'Ui W'ni 'i bZÀ`Yb'ZØ\fYbž'XJY'XJY'GJWYf\Y]h
j cb': i » [Àb[Yfb'i bX': U\ffUXZU\fyfb'[YZÀ\fxYb"

⇒8Yi hgW'UbX'[]h'X]Y'GhfU»Ybj Yf_Y\fgcfXbi b['fGhJ C Łž'X]Y'X]Y
FY[Y'b'ZØf'XYb'GhfU»Ybj Yf_Y\fg'ZYgh'Y[hž']b_'i g]] Y'XYf'5\ bXi b[
j cb'; YgWk]bX][_Y]hgØVYfgWfY]hi b[Yb''8]Y'GhfUZYb'_ØbbYb'Y
bUW'GWk YfY'XYg'J Yfgbc»Yg'Yf\YV'W'gY]b''9]b'6`]W_]b'XYb
cZZ]n]Y''Yb'6i » [Y'X_UhU'c['nY][hž'XUgg'X]Y'GhfUZYb'VY]
i bhYfgW]YX'W]ghYb'J Yf_Y\fgj YfghØ»Ybž'XUfi bhYf'Ui W'XUg
, VYfZU\fyb'fchYf'5a dY'b'cXYf'XUg'B]W'hY]b\U'hYb'XYg
YfZcfXYf'WYb'5VghUbXgž'_Uf'[YfY[Y'h'g]bX"

A cV]'Yf'6`]hnYf. ': `YI]V]'hÀh'i bX'HYWk bc`c []Y

A cV]'Yf'F UXUf'ghY\h'YXYf'6Y\ØfXY'ni f'J YfZØ[i b[ž'k Ug'Y]bY
ZYI]V'Y', VYfk UWk i b['XYg'J Yf_Y\fg'Yfa Ò['Wk'h''8]YgY'6`]hn[YfÀhY
g]bX'gWk bY''i bX'i b_ca d']n]Yfh'Ui Zni VUi Ybž'Ui W'Ub
i bYfk UfhYhYb'c fhYb''9]b'hmd]gWYg'6Y]gd]Y''gh'XYf'9]bgUhn'j cb
6`]hnYfbž'X]Y'Ui ZY]bYa 'GhU]j 'a cbh]Yfh'cXYf']b'i bUi ZÀ`][
dUf_YbXYb': U\fnYi [Yb'dcg]h]cb]Yfh'g]bX''8]YgY'; YfÀhY
j Yfk YbXYb'HYWk bc`c []Ybž'X]Y'Ui W'VY]'ZYgh']bghU''YfhYb'6`]hnYfb
ni a '9]bgUhn'_ca a Ybž'k]Y'Y_Y_hfca U[bYh]gWY'K Y''Yb'cXYf
@]Wk hg][bU'Y''9g'k]fX'Y]b'G][bU''Ui g[YgYbXYhž'XUg'j cb'XYb
: U\fnYi [Yb'fYZY_h]Yfh'k]fXž'i a 'UbgW'Y]»YbX'X]Y
; YgWk]bX][_Y]h'ni 'VYfYWk bYb"

K Yf'Yfk]gW'h'k]fXž'Yf\À'h']b'XYf'FY[Y''Y]b'6i » [Y'Xž'UVYf'Yg'_Ubb
Ui W'ni 'Di b_hYb']b': 'YbgVi f['cXYf'gc[Uf': U\fj YfVchYb'_ca a Ybž
k Ybb'X]Y'J YfghØ»Y'[fUj]YfYbX'g]bX''8]Y'6Y\ØfXYb'gYhnYb'XU\Yf
Ui Z'X]YgY'HYWk b]_ž'i a 'b]Wk'h'bi f'X]Y'J Yf_Y\fgg]WYf\Y]h'ni
Yf\Ò\Ybž'gcbXYfb'Ui W'XUg'J Yf_Y\fgj Yf\U'hYb']bg[YgUa h'ni
j YfVYggYfb"

K Ybb'G]Y'k Y]hYf\]b'Ui Z'XYa '@Ui ZYbXYb'V'Y]VYb'a ÒW'hYbž'k Ug
X]Y'J Yf_Y\fgg]hi Uh]cb']b'?cV'Ybn'VYhf]Zž'\UVYb'G]Y'X]Y
A Ò['Wk _Y]hž'HfUZZ]Wl dXUhYg'ØVYf'j YfgW]YXYbY'gcn]U'Y
D'UhhZcfa Yb'ni 'j YfZc'[Yb''8]YgY'D'UhhZcfa Yb'V]YhYb'b]Wk'h'bi f
⇒Zcfa Uh]cbYb'ØVYf'U_hi Y''Y'6`]hnYfghUbXc fhYž'gcbXYfb'Ui W'ØVYf

U`[Ya Y]bY`J Yf_Y\fga Y`Xi b[Yb"

8]Y`J YfUbhk cfhi b[`XYg': U\ fYfg

8]Y`J YfUbhk cfhi b[`ZØf`X]Y`G]WXYf\Y]h]a`GhfU»Ybj Yf_Y\`f`Y[h`Yhnh]W`VY]`YXYa`Y]bnY`bYb`J Yf_Y\`fghY]`bY\`a`Yf`G]W`Ub
; YgWk]bX][_Y]hgVY[fYbni b[Yb`ni` \U`hYbž]gh`Y]bY`Y]bZUWY
A U» bU\`a`Yž`X]Y`YbhgWY]XYbX`XUØf`]ghž`I`bZÄ`Y`ni`j`Yfa`Y]XYb
i`bX`X]Y`Y][YbY`G]WXYf\Y]h`gck`j]Y`X]Y`G]WXYf\Y]h`UbXYfYf
J Yf_Y\`fghY]`bY\`a`Yf`ni`[Yk`Ä`f`Y]ghYb`"5W`hYb`G]Y`U`gc`XUfUi`Zž]b
XYf`<`Ubg]6ÖW`_Yf]GhfU»Y`i`bX`ØVYfU`UbXYfgž`k`c
; YgWk]bX][_Y]hg`cbhfc`Yb`Yfk`UfhYh`k`YfXYbž`a`]h`6YXUW`h`ni
ZU\`fYb"

8]Y`VYfk UW`i b[`j`cb`; YgWk]bX][_Y]hgj`YfghÖ»Yb`Xi`fW`a`cV]Y`
6`]hYf`\`Uh]b`8Yi`hgW`UbX`]b`XYb`YhnhYb`š\`fYb`Ub`6YXYi`hi`b[
[Yk`cbbYb`"8]Y`GhÄXhY`i`bX`; Ya`Y]bXYb`j`Yfgi`WYbž`X]Y
J Yf_Y\`fgg]WXYf\Y]h`ni`Yf\`Ö`Ybž]bgVYgcbXYfY`Ub`i`bZU`hfÄW`h][Yb
GhY`Yb`"è`j`]Y`Yb`; Ä`Yb`k`YfXYb`X]Y`6`]hYf`b]W`h`bi`f`ni`f`5`bXi`b[
j`cb`; YgWk]bX][_Y]hgØVYfhfYhi`b[Yb`Y]b[YgYhnhž`gcbXYfb`Ui`W
ni`f`GYbg]V]`g]Yfi`b[`XYf': U\`fYf`ZØf`J Yf_Y\`fgfY[Y`b`i`bX`X]Y
; YZU\`fYb`j`cb`ØVYf\`Ö`hYa`HYa`dc"

F Y`Yj Ubn`XYf

; YgWk]bX][_Y]hgØVYfk UW`i b[

9]b`U_h]j`Yf`5bgUhn`ni`f`; YgWk]bX][_Y]hgØVYfk UW`i b[`]gh
YbhgWY]XYbX`ni`f`J Yff]b[Yfi`b[`j`cb`J Yf_Y\`fgi`bZÄ`Yb`"@Ui`h
GhUh]gh]gWYa`6i`bXYgUa`h[UV`Yg]a`š\`f`&\$&&]b`8Yi`hgW`UbX
fi`bX`&ž)`A`j`]cbYb`J Yf_Y\`fgi`bZÄ`Yž]cb`XYbYb`ØVYf`"\$\$\$
DYfgcbYb`j`Yf`Yh`]W`cXYf`gWk`Yf`j`Yf`Yhnh`k`i`fXYb`"9]bY
g][b]Z]_UbhY`NU\`X]YgYf`i`bZÄ`Y`k`Uf`Ui`Z
; YgWk]bX][_Y]hgØVYfgW`fY]hi`b[Yb`ni`fØW`ni`ZØ\`fYb`"Ghi`X]Yb
nY][Ybž`XUgg`X]Y`9]bZØ\`fi`b[`a`cV]Yf`6`]hYf`]b`gc[YbUbbhYb
<`chgd`chg`ni`Y]bYf`g][b]Z]_UbhYb`F`YXi`n]Yfi`b[`XYf`[Ya`Y`XYhYb
J Yf_Y\`fgi`bZÄ`Y`]b`X]YgYb`6YfY]WYb`ZØ\`fhY"

5i gk]f_i b[Yb`Ui Z`XUg': U\ fj Yf\ U`hYb

8]Y`DfÅgYbn`a cV]`Yf`6`]mYf`\Uh`b]W`h`bi`f`Y]bY`UVgW`fYW`YbXY
K]f_i b[`Ui Z`HYa`dcg0bXYfž`gcbXYfb`VYY]bZi`ggh`Ui`W`XUg
U`[`Ya`Y]bY`: U\ fj Yf\ U`hYb""9]bY`l`bhYfgi`W`i`b[`XYg`8Yi`hgW`Yb
J Yf_Y`f`gg]W`Yf\Y]hgfUhg`f`B`J`F`L`\Uh`Yf[`YVYbž`XUgg': U\ fYf`]b`XYf
B`Å`Y`j`cb`?`cbhfc`ghY`Yb`k`Yb][`Yf`[`YbY][`h`g]bXž`X]Y
; YgW`k`]bX][`_Y]hg[`fYbnYb`ni`ØVYfgW`fY]hYb""Ni`XYa`inY][`Yb
l`a`ZfU[`Ybž`XUgg`Y]b`;`fc»`hY]`XYf`6`YZfU[`hYb`X]Y`A`Y]bi`b[`j`Yfhf]hž
XUgg`a`cV]`Y`6`]mYf`XUg`G]W`Yf\Y]hgVYk`i`gghgY]b`]a
GhfU»`Ybj`Yf_Y`f`Yf\`Ø`Yb"

? f]h]_`i`bX`8`]g_i`gg]cb

Hfchn`XYf`dcg]h]j`Yb`5gdY`hY`[`]Vh`Yg`Ui`W`K`]XYfghUbX`[`Y[`Yb`X]Y
ni`bY`a`YbXY`Bi`hni`b[`a`cV]`Yf`6`]mYf`"?"f]h]_Yf`Uf[`i`a`Ybh]YfYbž
XUgg`X]Y`A`U»`bU`a`Yb`c`Zi`U`g`?`UggYba`UW`YfY]`Ub[`YgY`Yb
k`YfXYb`i`bX`k`Yb][`Yf`XUg`N]Y`XYf`J`Yf_Y`f`gg]W`Yf\Y]h]j`YfZc`[`Yb`
8]Yg`\Uh`ni`8]g_i`gg]cbYb`ØVYf`X]Y`HfUbgdUfYbn`XYf
6`]mYfghUbXcfhY`i`bX`X]Y`J`Yfk`YbXi`b[`XYf`9]bbU`a`Yb`Ui`g
6i`»`[`Y`XYfb`[`YZ0`fh`9]b][`Y`6i`bXYg`Å`bXYf`Yf[`fY]Z]b`VYfY]hg
A`U»`bU`a`Ybž`i`a`X]Y`GhUbXcfhY`XYf`a`cV]`Yb`6`]mYf`hfUbgdUfYb`hYf
ni`[`YghU`hYbž`Yhk`U`Xi`fW``hYfbYhdcfhU`Yž`Ui`Z`XYbYb`6`Øf[`Yf
5i`g_i`bZi`ØVYf`X]YgY`Z]bXYb`_ØbbYb"

h`g[`YgUa`h]gh`Yg`k`]W`h][`ž`Y]b`;`Y]W`[`Yk`]W`h`nk`]gW`Yb`XYf
8i`fW`gYhni`b[`j`cb`J`Yf_Y`f`gfY[`Y`b`i`bX`XYf':`ØfXYfi`b[`Y]bYg
j`YfUbhk`cfhi`b[`gVYk`i`gghYb`: U\ fj Yf\ U`hYbg`ni`Z]bXYb""8]Y`a`cV]`Y
; YgW`k`]bX][`_Y]hgØVYfk`UW`i`b[`_Ubb`XUni`VY]hfU[`Ybž`VY]XYg`ni
YffY]W`Ybž`k`Ybb`g]Y`]b`Y]bYa`_`UfYbž`hfUbgdUfYb`hYb`F`U`a`Yb
VYhf]YVYb`k`]fXž`k`]Y`Yg`ghi`X]YbZc`[`YbX`VY`Y[`h]gh`"K`Y]hYfY
h`Zc`fa`Uh]cbYb`ni`J`Yf_Y`f`gg]W`Yf\Y]h`i`bX
; YgW`k`]bX][`_Y]hg`cbhfc`Yb`Z]bXYb`G]Y`Ui`Z`XYf`K`YVg]hY`XYg
8Yi`hgW`Yb`J`Yf_Y`f`gg]W`Yf\Y]hgfUhg`f`K`j`f`"XY`L"

6Ygi W\Yb`G]Y`i bg`Ui Z.`b!U["XY