

9]b`Y hnhYf`K i bgWΛ .`< UbbY`cfYg
i bj Yf[Ygg`]WΛ Y`GUZUf]`]a`Ncc`@Y]dn][

<UbbY`cfY`YfZ0`h'g]WΛ`]\fYb`Y hnhYb`K i bgWΛ .`9]bY`GUZUf]`]a
Ncc`@Y]dn][`a`h`]\fYf': Ua`]'Y`XUb`_`XYg`5G6!
K ØbgWΛ Yk U[Ybg`B]YXYfgUWΛ gYb"

9]b`i bj Yf[Ygg`]WΛ Yf`HU[`]a`Ncc`@Y]dn][`k i fXY`Z0f`X]Y`+) !`Å\`f][Y
<UbbY`cfY`Ui`g`B]YXYfgUWΛ gYb`K`]f`_]WΛ`_Y]hž`U`g`g]Y`[`Ya`Y]bgUa
a`h`]\fYf': Ua`]'Y`Y]bY`VYgcbXYfY`GUZUf]`i bhYfbU`a`"8]Yg`k`Uf
`Y hnh]WΛ`]\f`<YfnYbgk i bgWΛ ž`XYb`g]Y`g]WΛ`XUb`_`XYg
K ØbgWΛ Yk U[Ybg`B]YXYfgUWΛ gYb`YfZ0`Yb`_`cbbhY" <UbbY`cfYž
X]Y`Ub`?`fYVg`Yf`_`fUb`_`h]ghž`VYUVg]WΛ h][`hYž`]\fY`9b`_`Y]b`@Ycb]Y`]b
@Y]dn][`ni`VYgi`WΛ Ybž`k`Å`fYbX`Ui`WΛ`>gg]WUž`X]Y`GWΛ k`YghYf`j`cb
@Ycb]Yž`XYb`VYgcbXYfYb`HU[`UVfi`bXYhY"8 Ug`HYUa`XYg
K ØbgWΛ Yk U[Ybg`nY][`hY`g]WΛ`YfbYi`h`Y]bZ0`gUa`i`bX`Yb[U[]Yfhž
i`a`X]YgYb`Ya`ch]cbU`Yb`5i`gZi`[`ni`Yfa`Ò[`]WΛ Yb"

8Yf`K ØbgWΛ Yk U[Yb`B]YXYfgUWΛ gYb`U`h'g]WΛ`U`g`k`Yfhj`c`Y
I`bhYfghØhni`b[`Z0f`A`YbgWΛ Yb`]b`]\fYf`Y hnhYb`@YVYbgd`UgY
YhUV`]Yfh"8 Ug`HYUa`d`Ubh`5i`gZ0[`Yž`X]Y`Ui`Z`X]Y`K`ØbgWΛ Y`i`bX
6YXØfZb]ggY`XYf`6Yhfc`ZYbYb`ni`[`YgWΛ b]hhYb`g]bX"6Y]`XYf
Cf[`Ub]gUh]cb`gc`WΛ Yf`F`Y]gYb`k`]fX`ghYhg`Ui`Z`XUg`K`c`_`XYf
:`U`f[`ÅghY`[`YUWΛ hYhž`k`c`VY]`a`YX]n]b]gWΛ`[`YgWΛ i`hYg`DYfgcbU`j`cf
C`fh]ghž`i`a`Y]bY`g]WΛ YfY`i`bX`_`ca`ZcfhUV`Y':`U`fh`ni`[`Yk`Å`f`Y]ghYb"
9g]gh`X]Y`A`]gg]cb`X]YgYf`≠]h]Uh]j`Yž`9a`ch]cbYb`i`bX`9f]bbYfi`b[`Yb
ni`gWΛ UZZYb`i`bX`XYb`;`ÅghYb`Y]bYb`Y hnhYb`[`fc`»`Yb`K`i`bgWΛ`ni
YfZ0`Yb"

8Yf`<`Ò\`Ydi`b`_`h`XYf`GUZUf]

8]Y`gdUbbYbXY`F`Y]gY`VY[`Ubb`a`]h`Y]bYf`5i`hcZU`fh`bUWΛ`@Y]dn][`ž

VY]`XYf`<UbbY`cfY`j`cb`XYb`K`i`bgW`YfZ0`Yf]bbYb`GUbXfU`i`bX
7`f]gh]bU`VY[`Y]hYh`k`i`fXY`"8]Y`:`U`fnY]h`j`Yf[`]b[`]k`]Y]a`:`i`[`ž`XU
X]Y`GYb]cf]b`a`]h`A`i`g]_`]fYg`@]YV`]b[`g_0bgh`Yfgž`æ`b`8Ybj`Yfž
i`bhYf`U`hYb`k`i`fXY`"Δ`f`[`fc»`Yg`N]Y`j`cf`5i`[`Ybž`Å`hYb`X]Y
?]`ca`YhYf`_`Ui`a`i`gW`bY`Yf`j`Yf[`Y`Yb`_0bbYb`"8]Y`J`cfZFY`i`XY`Ui`Z
XUg`K`]YXYfgY`Yb`a`]h`@Ycb]Y`i`bX`XUg`VY]`cfghY`YbXY`5VYbhY`i`Yf
]a`Ncc`hfi`[`Yb`ni`_]fYf`Zf0`W`Yb`Gh]a`a`i`b[`]VY]"

5a`Ncc`Ub[`Y`_ca`a`Ybž`[`UV`Yg`Y]bY`k`i`bXYfVUFY`,`VYffUgW`i`b[`.
Xgg]WU`U`hY`Yg`g]W`b]W`h`b`Y`a`Yb`UggYbž`<UbbY`cfY`i`bX`X]Y
UbXYfYb`Ua`9]b[`Ub[`]ni`Ya`dZUb[`Yb`"8Ug`ZFY`X][`Y`K`]YXYfgY`Yb
VYgW`YfhY`XYf`:`Ua`j]Y`Y]bY`i`bj`Yf[`Ygg`]W`Y`NY]hž`X]Y`Xi`fW`X]Y
HY]`bU`a`Y`Y]bYf`@Ua`UZ0`fYf]bž`X]Y`XUg`GUZUf]!HYUa`VY[`f0»`hYž
bcW`Vi`bhYf`k`i`fXY`";`Ya`Y]bgUa`Yf`_i`bXYhYb`g]Y`X]Y`H]Yfk`Y`h`XYg
Nccg`i`bX`Y]Y`Yb`g]W`j`cb`XYb`j`YfgW`]YXYbYb`5fhYb`0VYffUgW`Yb
i`bX`ZUgn]b]YfYb"

;`Ya`Y]bgUa`Y`9f]bbYfi`b[`Yb`i`bX`h]Yf]gW`Y
6Y[`Y[`bi`b[`Yb

8]Y`9f`YVb]ggY`]a`Ncc`k`UfYb`b]W`h`bi`f`Y]bY`5V`Yb`_i`b[`]j`cb`XYf
9f`_fUb`_i`b[`ž`gcbXYfb`j`cf`U`Ya`Y]bY`k`Yfhj`c`Y`Y`Y`[`Yb`Y]hž`NY]h
a`]hY]bUbXYf`ni`j`YfVf]b[`Yb`"BYVYb`XYb`VYY]bXfi`W`YbXYb`H]YfYb
k`UfYb`Dca`a`Yg`i`bX`Y`YgW`]W`hYbž`X]Y`a`]bXYghYbg`YVYb`gc`k`]W`h][
k`UfYbž`HY]`XYg`HU[`Yg`"<UbbY`cfY`ghfU`hY`j`cf`:`fY`i`XYž`U`g`g]Y`X]Y
9`Y`ZUb`hYb`i`bX`5ZYb`VYc`VUW`hYhYž`X]Y`]fYb`6Ygi`W`ni`g`Ahn`]W`
VYfY]W`YfhYb`"9]b`k`Y]hYfYf`gW`0bYf`A`ca`Ybh`k`Uf`X]Y`,`VYf[`UVY
Y]bYf`D`0gW`Z][`i`f`Y]bYg`C`fUb[`]h`Ubg`j`cb`XYb
K`i`bgW`YfZ0`Yf]bbYb`U`g`5bXYb`_Yb`Ub`X]YgYb`VYgcbXYfYb`HU[`"

B`UW`Y]bYa`Yf`YVb]gfY]W`Yb`HU[`]i`bX`j`c`Yf`9]bXf0W`_Y`hfUh`X]Y
;`fi`ddY`XYb`F`0W`_k`Y[`]bUW`B]YXYfgUW`gYb`Ub`"Hfcm`XYf
_0fdYf`]W`Yb`9fgW`0dZ`b[`]k`UfYb`U`Y`Zfc`ž`X]YgYb`VYgcbXYfYb
HU[`]Yf`YVh`ni`U`UVYbž`i`bX`g]Y`fYZY`_h]YfhYb`0VYf`X]Y`k`]YXYf
[`Yk`cbbYbYb`9f]bbYfi`b[`Yb`"8]YgY`[`Ya`Y]bgUa`Yb`Gh`i`bXYb
V`Y]VYb`i`bj`Yf[`Ygg`]W`i`bX`g]bX`Y]b`6Yk`Y]g`Z0f`X]Y`6YXY`i`hi`b[
gc`W`Yf`b]h]Uh]j`Yb"

9]bY`VYXYi hYbXY`A]gg]c b`ZØf`@Y hnhY

K ØbgWXY

8Yf`K ØbgWXYk U[Yb`B]YXYfgUWxgYb`gYhnhg]Wx`b]Wx`h`bi f`XUZØf
Y]bž`bX]j]Xi Y`Y`K ØbgWXY`b`XYf`@YVYbgnY]hj`cb`A YbgWXYb`ni
YfZØ`Yb`"9g`]gh`Y]b`Y]bn][Ufh][Yg`Dfc`Y`_hž`XUg`X]Y`6YXYi hi b[`XYg
6Yn]Y\i b[gbYhmk Yf`_Yg`]bbYf\U`V`XYf`: Ua`]]Yb`i bX`X]Y
K YfhgWx`Åhni b[`XYg`@YVYbg`gY`Vgh]b`XYb`: c`_i`g`fØW`h`"8Yf
5i Zk UbXž`XYb`X]Y`Cf[Ub]gUh]cb`VYhfY]Vhž`]gh`Ybcfa`ž`i bX`k Ybb
a Ub`VYXYb`_hž`XUgg`Yg`_Y]bY`?cghYb`ZØf`X]Y`6Yhfc`ZZYbYb`[]Vhž`k]fX
i a gc`XYi h]WXYfž`k]Y`k]Wx]h[`GdYbXYb`ZØf`X]Y`: cfhZØ\fi b[`X]YgYf
5fVY]h`g]bX`"K Yf`XUni`VY]hfU[Yb`a`ØWx`hYž`_Ubb`X]Yg`Xi fWx`Y]bY
Z]bUb]Y`Y`I bhYfghØhni b[`hi`b`i bX`a`]h\Y`ZYbž`UbXYfYb`]b`XYf
`YhnhYb`D\UgY`]\fYg`@YVYbg`i bj Yf[Ygg`]WXY`A ca YbhY`ni
Yfa`Ø[`]WXYb`"

8Yf`9]bZi gg`j`cb`K`i`bgWXYfZØ`i`b[`gX]YbghYb
Ui`Z`X]Y`@YVYbgei`U`]hÅh

8]Y`9fZØ`i`b[``YhnhYf`K ØbgWXY`U`h`X]fY`_hYb`9]bZi`gg`Ui`Z`X]Y
@YVYbgei`U`]hÅh`j`cb`A YbgWXYb`]b`XYf`DU``]Uh]j`d`UgY`"NU\`fY]WXY
Ghi`X]Yb`nY][Ybž`XUgg`d`c]h]j`Y`9f`YVb]ggY`k`]Y`5i`gZØ[`Y`c`XYf`XUg
Ni`gUa`a`YbgY]b`a`]h[`Y`]YVhYb`A`YbgWXYb`XUg`Ya`ch]cb`U`Y
K`c`\`VYZ]bXYb`ZØf`XYfb`i`bX`i`bhYf`I`a`ghÅb`XYb`gc[`Uf`X]Y
@YVYbgei`U`]hÅh`ghY][`Yfb`_`ØbbYb`"@Ui`h`Y]bYf`I`bhYf`gi`Wxi`b[`XYf
I`b]j`Yfg]hÅh`9I`YhYf`hfÅ[`h`XUg`J`YfVf]b[`Yb`j`cb`NY]h`a`]h
:`Ua`]]Yba`]h[``]YXYfb`YbhgWXY]XYbX`ni`f`Ya`ch]cb`U`Yb`GhUV`]hÅh`j`cb
6Yhfc`ZZYbYb`VY]ž`]bgVYgcbXYfY`]b`gWx`k`]Yf][`Yb`NY]hYb`XYg`@YVYbg`"

8]YgY`d`c]h]j`Yb`GWx`k`]b[`i`b[`Yb`g]bX`Ui`Wx`VY]`<UbbY`c`fY`k`Å`\fYbX
]\fYf`FY]gY`ni`f`GUZUf]`]a`Ncc`@Y]dn][`gdØfVUfž`X]Y`b]Wx`h`bi`f`XYb
`YhnhYb`K`i`bgWx`YfZØ`hYž`gcbXYfb`]\f`Ui`Wx`Y]bYb`A`ca`Ybh`XYg
;`ØW`_g`i`bX`XYf`:`fYi`XY`VYgWXYfhYž`XYf`ZØf`]\fY`:`Ua`]]Y
i`bj`Yf[`Ygg`]Wx`V`Y]Vh`Gc`Wx`Y`Yf[`fY]ZYbXYb`9f`YVb]ggY`ghY`Y`b`]a
J`c`f`XYf[`fi`bX`XYf`5fVY]h]j`cb`C`f[`Ub]gUh]cbYb`k`]Y`XYa`5G6ž`X]Y
g]Wx`Ui`Z`X]Y`I`bhYfghØhni`b[`j`cb`A`YbgWXYb`]b`]\fYb`YhnhYb
@YVYbgUVgWx`b]hhYb`gdYn]U`]g]Yfh`\UVYb`"

8 Yf'5G6!K ØbgWk Yk U[Yb'i bX'gY]bY

5b[YVchY

8 Yf'5G6!K ØbgWk Yk U[Yb'B]YXYfgUWk gYb'V]YhYh'ZØf'A YbgWk Yb']b
XYf'DU''U]h]j d\UgY'Y]bY'J]Y'nU\''j cb'8]Ybgh'Y]ghi b[Yb'Ubž'X]Y'Ui Z
X]Y']bX]j]Xi Y''Yb'6YXØfZb]ggY'XYf': U\ f[ÀghY'UV[Ygh]a a'h]g]bX"
BYVYb'XYf'C f[Ub]gUh]cb'j cb'5i gZØ[Yb'VY]b\U'hYh'X]YgYf'GYfj]W
Ui W'X]Y'6YfY]hghY''i b['j cb'a YX]n]b]gWk '[YgWk i'hYa 'DYfgcbU'ž
k Y'Wk Yg'k À\fybX'XYf': U\ fhYb'j cf'C fh]gh"8 UXi fW'k]fX'b]Wk h'bi f
X]Y'G]Wk Yf\Y]h'[Yk À\f'Y]ghYhž'gcbXYfb'Ui W'XUg'; YZØ\''j cb
; YVcf[Yb\Y]h'i bX'i bhYfghØhni b['j Yfa]hY'h"

8]Y'FY]gYb'g]bX'_cghYbZfY]'ZØf'X]Y'VYhfcZYbYb'DYfgcbYbž'k Ug'Yg
Yfa Ø[']Wk hž'XUgg'gcn]U'Y'i bX'ZUa]]ÀfY'6]bXi b[Yb'Ui W']b
gWk]Yf][Yb'NY]hYb' [YdZY[h'k YfXYb'_ØbbYb" 'A]h'XYa ' : c_i g'Ui Z
9fZØ''i b['j cb''YhnhYb' < YfnYbgk ØbgWk Yb'hfÀ[h'XYf'5G6_U_h]j 'ni f
K YfhgWk Àhni b['XYg'@YVYbg'i bX'XYf'dYfgØb']Wk Yb'; YgWk]Wk hYb
VY]ž'i bX'\]Zh'XYb'A YbgWk Ybž'hfc'hni]\fYf'? fUb_\Y]h'gWk ØbY
9f]bbYfi b[Yb'ni 'gWk UZZYb"

8]Y'6YXYi hi b['j cb'GdYbXYb'ZØf'X]Y

: cfhZØ\fi b['XYf'5b[YVchY

8]Y'5fVY]h'XYg'5G6!K ØbgWk Yk U[Ybg'k ÀfY'c\ bY'X]Y'Z]bUbn]Y''Y
l bhYfghØhni b['Xi fW'GdYbXYb'b]Wk h'a Ø[']Wk "5b[Yg]Wk hg'XYf
[Ygh]Y[YbYb'B UWk ZfU[Y'g]bX'fY[Y'a À»][Y'GdYbXYb'Y]bY'k]Wk h][Y
; fi bX'U[Yž'i a 'Ui W'k Y]hYf\]b' < YfnYbgk ØbgWk Y'ni 'YfZØ''Yb"8]Y
C f[Ub]gUh]cb']gh'Ui Z; Y'XYf'Ub[Yk]YgYbž'i a 'gck c\''X]Y
8 i fWk ZØ\fi b['XYf'FY]gYb'U'g'Ui W'X]Y'6YhfYi i b['Xi fWk
: UWk dYfgcbU'Z]bUbn]YfYb'ni '_ØbbYb"8 i fWk 'j YfgWk]YXYbY
: i bXfU]g]b[!9j Ybhg'i bX'X]Y'A Ø[']Wk _Y]hž'cb']bY'ni 'gdYbXYbž'k]fX
XUg'6Yk i gghgY]b'ZØf'X]YgYg'k]Wk h][Y'H\Ya U'[YghÀf_h"

Ni gÀhni]Wk 'ni f'Z]bUbn]Y''Yb'l bhYfghØhni b['_ØbbYb': fY]k]''[Yž'k]Y
Ui W'X]Y'K i bgWk YfZØ''Yf]bbYb'GUbXfU'i bX'7\ f]gh]bUž'Y]bY
YbhgWk Y]XYbXY'F c''Y'XUVY]gd]Y'Ybž']bXYa 'g]Y'g]Wk 'Yb[U[]YfYb
i bX'X]Y'9fZØ''i b['X]YgYf''YhnhYb'K ØbgWk Y'U_h]j 'VY['Y]hYb"8]Yg

Z0fXYfh'b]W.h'bi f'X]Y'; Ya Y]bgWUZh'gcbXYfb'\]Zh'Ui W'XUVY]ž'XYb
A YbgWYb']b']\fYf''YmhYb'@YVYbgd\UgY'Y]b'k Yb][': fYi XY'i bX
<cZbi b['ni 'gWYb_Yb"

8YhU]g

6Ygi WYb'G]Y'i bg'Ui Z.'b!U["XY