

F UXZU\fyf'a]h&ž() 'Dfca]`Y. 'Dc`]nY]
ghcddh'f]g_UbhY': U\fh'Ui Z'XYf'6%%\$

6Yhfi b_YbYf'F UXZU\fyf'a]h&ž() 'Dfca]`Y'Ui Z'XYf'6%%\$']b
8Ya a]b'[Yghcddh'Dc`]nY]'Yfa]hhY'h'k Y[Yb'Hfi b_Yb\Y]h'a
GhfU»Ybj Yf_Y\`f"

⊖`XYb'gdÅhYb'5VYbXghi bXYb'XYg'&("5i [i gh&\$&('k i fXY'X]Y
Dc`]nY]']b'8Ya a]b'ØVYf'Y]bYb'[YZÅ\`f]WYb'F UXZU\fyf']bZcfa]Yfh'
9]b'Ui Za Yf_gUa Yf'NYi [Y'\UhhY'XYb'Bchfi Z[Yk Å\`hž'bUWXYa 'Yf
VYa Yf_h'\UhhYž'XUgg'Y]b'A Ubb'Ui Z'XYf'6i bXYgghfU»Y'%%\$'j cb
9i [Yb]YbVYf['bUW'G]YXYbVfØbnck ']b'Ui ZU`YbX'i bg]WYfYf
: U\fk Y]gY'i bhYfk Y[g'k Uf'"8]Y'VYgWf]YVYbYb'GW'Ub[Yb`b]Ybž
X]Y'XYf'F UXZU\fyf'j c`ZØ\fhYž'a UW'hYb'gWbY`XYi h]W'ž'XUgg'Yf
cZYbVUf'Yf\YV']WYb'9]bZi gg'j cb'5`_c\c`'j YfgdØfhY"

8]Y'U`Ufa]YfhYb'6YUa hYb'XYg'Dc`]nY]\Ui dhfYj]YfYg'8Ya a]b
']Y»Yb'b]W'h`Ub[Y'Ui Z'g]W'k UfhYb'"8Yf': i b_ghfY]ZYbk U[Yb'hfUZ
VU'X'Ua 'Cfh'XYg'; YgWY\Ybg'Y]b'i bX'\]Y'h'XYb'(+!Å\`f][Yb
F UXZU\fyf'Ub'"6Y]'XYf'?cbhfc`Y'VYa Yf_hYb'X]Y'Dc`]n]ghYb'gcZc fh
XYb'ghUf_Yb'5`_c\c`[Yfi W']b'gY]bYf'5hYa 'i Zh'"8]Yg`']Y»'XYb
J YfXUW'h'Ui Z'Hfi b_Yb\Y]h'a 'J Yf_Y\`f'a Y\`f'U'g'bi f'd'Ui g]VY`
YfgWY]bYb"

< c\Y'Dfca]`YnU\`ZYgh[YghY`h

I a '[YbUi YfY'8UhYb'ni 'Yf\U'hYbž'ZØ\fhYb'X]Y'6YUa hYb'j cf'C fh
Y]bYb'5hYa U`_c\c`hYgh'Xi fW'ž'XYf'Y]b'Y]bXYi h][Yg'9f[YVb]g
']YZYfhY. '8Yf'F UXZU\fyf'\UhhY'gU[Y'i bX'gW'fY]VY'&ž() 'Dfca]`Y
]bhi g'"8 Ug]gh'Y]b'K Yfhž'XYf'k Y]h'ØVYf'XYf'Y[U'Yb'; fYbnY`']Y[h
i bX'Ui ZY]bY'Yf\YV']WY'; YZÅ\`fXi b['gck c\`ZØf'XYb'F UXZU\fyf
gY'Vgh'U'g'Ui W'ZØf'UbXYfY'J Yf_Y\`fghY]'bY\`a Yf'\]bk Y]gh"

Ni f; Yk Å\`Y]ghi b[`XYf'6Yk Y]gg]WYfi b[`k i fXY`XYf`A Ubb`]b`XUg
?fUb_Yb\`Ui`g`]b`8Ya`a`]b`[`YVfUW`hž`k`c`Y]bY`6`i`hYbhbU\`a`Y
j`cf[`Ybca`a`Yb`k`i`fXY`"8]Y`Dc`]nY]`\\UbXY`hY`XUfUi`Z\]b`i`a`[`Y\`YbXž
i`a`k`Y]hYfY;`YZU\`fYb`]a`GhfU»Ybj`Yf_Y\`f`ni`j`Yfa`Y]XYb"

8Yf`F`UXZU\`fYf`k`i`fXY`gW`Y]Y»`]W`Ui`g`XYb`dc`]nY]`]W`Yb
A`U»`bU\`a`Yb`Yb`h`UggYbž`UVYf`XUg`fYW`h`]W`Y`B`UW`gd]Y`"Åggh`b]W`h
`Ub[`Y`Ui`Z`g]W`k`UfhYb`"8]Y`ni`ghÅ`bX][`Yb`6Y\`ÖfXYb`\\UhhYb`VYfY]hg
Y]bY`5bnY][`Y`k`Y[`Yb`Hfi`b_Yb\`Y]h]a`GhfU»Ybj`Yf_Y\`f`[`Y[`Yb`]b
YfghUhhYh`Gc`W`Y`J`cfZÅ`Y`j`YfXYi`h]W`Ybž`k`]Y`k`]W`h][`Y`g`]ghž`XUg
Y][`YbY`K`c\`i`bX`XUg`XYf`5`[`Ya`Y]b\`Y]h]a`GhfU»Ybj`Yf_Y\`f`b]W`h
Xi`fW`5`_c\`c`_cbgi`a`ni`[`YZÅ\`fXYb"

9fghY`Dc`]nY]_ca`a`]gg]cb`a`UW`h`Ui`Z
5`_c\`c`dfcV`Ya`Uh]_`Ui`Za`Yf_gUa

9fghYf`Dc`]nY]\`Ui`dh_ca`a`]ggUf`>bg`l`ba`UW_ž`XYf`U`g`Dc`]nY]ZØ\`fYf
Ua`9]bgUhn`VYhY]][`h`k`Ufž`k`Y]gh`XUfUi`Z\]bž`XUgg`5`_c\`c`Ua
GhYi`Yf`c`XYf]b`X]YgYa`i`U`"Ui`ZXYa`F`UX`Y]bY
Yfbghni`bY\`a`YbXY;`YZU\`f`XUfghY`h`>XYf`gc`hY`g]W`XYf
J`YfUbhk`cfhi`b[`VYk`i`ggh`gY]bž`X]Y`Yf`ZØf`g]W`i`bX`UbXYfY`\\Uhž
k`Ybb`Yf]b]f[`YbXY]bYf: `cfa`Ua`GhfU»Ybj`Yf_Y\`f`hY]`b]a`a`h`ž`gc
l`ba`UW`"

Gc`W`Y`J`cfZÅ`Y`g]bX`b]W`h`bi`f`Y]b`fYW`h]W`Y`g`DfcV`Ya`ž`gcbXYfb
Ui`W`Y]b[`Y`gi`bX\`Y]h]W`Y`g`5`_c\`c`_cbgi`a`VYY]bhfÅW`h][`h`X]Y
F`YU`_h]cbgnY]hi`bX`XUg`l`fhY]`gj`Yfa`Ö[`Yb`i`bX`_Ubb`ZUhU`YbXYb`"b
Y]bYf`NY]hž]b`XYf`X]Y`A`YbgW`Yb`ni`bY\`a`YbX`Ui`Z`U`hYfbUhj`Y
J`Yf_Y\`fga`]hY`k`]Y: `U\`ffÅXYf`gYhnYbž`V`Y]Vh`XUg`H\`Ya`U`XYf
J`Yf_Y\`fgg]W`Yf\`Y]h`bUW`XYa`?`cbgi`a`j`cb`5`_c\`c`Y]b`nYbhfU`Yg
5b`Y[`Yb"

9g]gh`k`]W`h][`ž`XUgg`gc`k`c\`F`UXZU\`fYf`U`g`Ui`W`5i`hcZU\`fYf`g]W`
ØVYf`X]Y`F`]g]_Yb`]bZcfa`]YfhYb`i`bX`j`YfUbhk`cfhi`b[`gj`c`"U`UbXY`b`"
8Yf`J`cfZU`"b`8Ya`a`]b`]gh`Y]b`k`Y]hYfYg`6Y]gd]Y`XUZØfž`k`]Y`gW`bY`
Ui`g`Y]bYf`ZYi`W`h]Zf`Ö\`]W`Yb`B`UW`h`Y]bY`YfbghY`G]hi`Uh]cb`]a
GhfU»Ybj`Yf_Y\`f`Yb`hghY\`Yb`_Ubb"

8]Y'Dc`nY]UddY`Yfh'Ub'U`Y'6Øf[Yfz'gc`WXY'f]g]_cVY\UZhYhb
9bhgWXY]Xi b[Yb'ni`j Yfa Y]XYbž'i a`X]Y'G]WXYf\Y]h]a
GhfU» Ybj Yf_Y\`f'ni`[Yk`À\`f`Y]ghYb"8]Y'J YfUbhk`cfh]W_X]h`Y[h
'Yhnh]W_X]b`XYb`<`ÀbXYb`YXYg'9]bnY`bYbž'g]W_X]gY]bYf`Y][YbYb
; fYbnYb`VYk`i gghni`gY]b`i bX`]a`Nk`Y]ZY`Ui ZXUg: U\`fYb`ni
j Yfn]W_X]hb"8Yf: U`Yf]bbYfhi`bg`XUfUbž`XUgg`Y]bY`_i fnY: U\`fh
i bhYf'9]bZi gg`j cb`5`_c\`c`gWk`Yfk`]Y[YbXY`fYW_X]h]W_X]i bX
[Ygi bX\Y]h]W_X]Y: c`[Yb`\UVYb`_Ubb"

; YgYhn`]W_X]Y`F`Y[Y`i b[Yb`ni`f`F`UXZU\`fYf!
Hfi b_Yb\Y]h

⇒8Yi hgW_X]UbX`i bhYf`Y[h`XUg: U\`fYb`a`]h`XYa`i: U\`ffUX`YVYbZU`g
XYb`J`cf`gW_X]f]ZhYb`XYf`GhfU» Ybj Yf_Y\`fgcfXbi b[`fGhJ`C`L`"@Ui`hiz`&(U
GhJ; `]gh`Yg`F`UXZU\`fYfb`i bhYfgU[hž`Y]b`i: U\`ffUX`ni`ZØ\`fYbž`k`Ybb
g]Y`i bhYf`XYa`i`9]bZi gg`j cb`5`_c\`c`cXYf`8fc[Yb`ghY\`Yb"5V
Y]bYa`i`6`i hU`_c\`c`[Y\`U`h`j cb`%ž*`Dfca`]`Y`[Y`hYb`i: U\`ff`AXYf`]b
fYW_X]h]W_X]Yf`<]bg]W_X]h`U`g`i: U\`fnYi`[Y`ž`k`Ug`ni`Y]bYf`gc`Zc`fh][Yb
9bh]Y\`i b[`XYf: U\`fYf`Ui`Vb]g`ZØf`UbXYfY: U\`fnYi`[UfhYb`ZØ\`fYb
_Ubb"6Y][Yf]b[YfYb`5`Wc[Y`U[Yb`_Ubb`XYf`F`UXZU\`fYf`]a`a`Yf\]b
a`]h`Y]bYa`i`6i`»[Y`X`i bX`UbXYfYb`Ya`dZ]bX`]W_X]Yb`GhfUZyb`fYW_X]bYb`
⇒X]YgYa`gdYn]Z]gW_X]Yb: U`k`Uf`XYf`F`UXZU\`fYf`a`]h`&ž(`) `Dfca`]`Y`
Yf\`YV`]W_X]ØVYf`XYf`ni`Àgg][Yb`i: fYbnYž`k`Ug`fYW_X]h]W_X]Y`GW_X]f]hhY
bUW_X]g]W_X]n]Y\`Yb`k`]fX"

Ni`g`Àhn`]W_X]ni`XYb`fYW_X]h]W_X]Yb`?`cbgYei`YbnYb`V]f[h`XUg: U\`fYb
i bhYf`5`_c\`c`Y]bZi gg`Yf\`YV`]W_X]Y`F]g]_Yb"8]Y: YZU\`f`j`cb`i`bZ`À`Yb
i bX`J`Yf`Yhni`b[Yb`ghY][h`b]W_X]h`bi`f`ZØf`XYb`VYhfc`ZYbYb`i: U\`fYfž
gcbXYfb`Ui`W_X]ZØf`UbXYfY`J`Yf_Y\`fghY]bY\`a`Yf"9]bY`Ghi`X]Y`XYg
8Yi hgW_X]Yb`J`Yf_Y\`fgg]W_X]Yf\`Y]hgfUhYg`nY][hž`XUgg`VYhfi`b_YbYb
F`UXZU\`fYfb`Y]b`XYi`h]W_X]\`Ø\`YfYg`i`bZU`f]g]_c`ni`[YgW_X]f]YVYb`k`]fX"
@Ui`h`XYf`GhU]gh]_ZØf`XUg`J\`f`&\$&\$`k`UfYb`Yhk`U`%-`i`XYf
j`Yf`YhnhYb`F`UXZU\`fYf`]a`GhfU» Ybj Yf_Y\`f`i`bhYf`XYa`i`9]bZi gg`j`cb
5`_c\`c`"

I`bZU`ghUh]gh]_Yb`i`bX`5i`gk`]f`_i`b[Yb

8]Y'I bZU`ghUh]gh]_VYnØ[`]Wk`U`_c`c`VYX]b[hYf`J cfZÄ`Y`]a
GhfU» Ybj Yf_Y`f`]b`8Yi hgWk`UbX`]gh`U`Ufa]YfYbX" `a` `]X`f`&\$&'
k i fXYb`Ui h`XYa`GhUh]gh]gWk`Yb`6i bXYgUa h`ØVYf`&) "\$\$\$`i bZÄ`Y`
]a`GhfU» Ybj Yf_Y`f`fY[]ghf]Yfhž`X]Y`Ui Z`5`_c`c`ni fØW`ni ZØ`fYb
k UfYb" `8]Yg`Ybhgd`fÄWk`Y`Y]bYf`g][b]Z`_UbhYb`NU` `]`cb`j`Yf`YmhYb
i bX`[`YhØhYhYb`DYfgcbYb"

Ni gÄhn`]Wk`k]fX`]b`XYa`6Yf]Wk`h`XUfUi Z`]\b[Yk]YgYbž`XUgg`X]Y
5bnU`X`Yf`F`UXZU`fYfž`X]Y`i bhYf`9]bZi`gg`j`cb`5`_c`c`ghY`Ybž`]b
XYb`YmhYb`]X`fYb`hYbXYbn]Y`ghY][h`8]Yg`Äggh`g]Wk`hY`k`Y]gY`Ui`Z
XYb`5bgh]Y[]`cb`i`fY]nY]h`i bX`Gdc`fU`_h]j`]hÄhYb`ni fØW`ZØ`fYbž`VY]
XYbYb`5`_c`c`_cbgi`a`]Yfh`k`]fX`ž`c`bY`XUgg`X]Y`;`YZU`fYb`VY]a
F`UXZU`fYb`Ui`gfY]Wk`YbX`VYfØW`g]Wk`h][`h`k`YfXYb" `6Yk`i`gghY
5i`Z`Äfi`b[`gd`f`c[`fUa`a`Y`i`bX`A`U»`bU`a`Yb`ni`f`GYbg]V`]g]Yfi`b[
_ØbbhYb`]\]Yf`dc`g]h]j`Y`J`YfÄbXYfi`b[`Yb`Vf]b[`Yb"

; Ygi bX`Y]h`]Wk`Y`i`bX`gcn]U`Y`?`cbgYe`i`YbnYb

8]Y`[`Ygi`bX`Y]h`]Wk`Yb`F`]g]_Yb`XYg`ØVYfa`Ä»][`Yb`5`_c`c`_cbgi`a`g
g]bX`[`i`h`Xc`_i`a`Ybh]Yfh" `@Ub[`Zf]gh][`Yf`5`_c`c`a`]ggVfUi`Wk`_`Ubb`ni
Y]bYf`J`]Y`nU` `]`cb`[`Ygi`bX`Y]h`]Wk`Yb`DfcV`Ya`Yb`ZØ`fYbž`XUfi`bhYf
@VYfYf`_fUb`_i`b[`Ybž`<`Yfn!`?`fY]g`Ui`Z`9f`_fUb`_i`b[`Yb`i`bX
dgmWk`]gWk`Y`GhØfi`b[`Yb" `: `Øf`X]Y`;`YgY`gWk`UZh`VYXYi`hYh`X]Yg`b]Wk`h
bi`f`Y]bY`6Y`Ughi`b[`XYg`;`Ygi`bX`Y]h]ggmghYa`gž`gcbXYfb`Ui`Wk
gcn]cØ`cbca`]gWk`Y`:`c`[`Yb`Xi`fWk`Yf`Ø`hY`?`fUb`_`Y]hg`cghYb`i`bX
XYb`J`Yf`i`gh]j`cb`5fVY]hg`_fUZh"

9]bY`I`a`ZFU[`Y`Ui`g`XYa` `]X`f`&\$&&`\Uh[`YnY][`hž`XUgg`ØVYf`)'`\$i` `XYf
6Y`ZFU[`hYb`VYfY]h]g]bXž`A`U»`bU`a`Yb`ni`f`5`_c`c`fYXi`_h]cb`]a
GhfU»`Ybj`Yf_Y`f`ni`i`bhYfghØhnYbž`XUfi`bhYf`j`YfghÄf`hY`?`cbhfc`Yb
i`bX`5i`Z`Äfi`b[`g`_Ua`dU[`bYb" `Gc`Wk`Y`#]h]Uh]j`Yb`_ØbbhYb
dchYbn]Y`Y`?`f]gYb`k`]Y`X]Yž`X]Y`]a` `: `U`X`Y`g`F`UXZU`fYfg`]b`8Ya`a`]b
ghUhhZUbXYbž`Y]bXÄa`a`Yb`i`bX`X]Y`ÖZYbh]Wk`Y`G]Wk`Yf`Y]h`Yf`Ø`Yb"

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